ARCHAEOLOGICAL SURVEY OF ALBERTA

# ALBERTA PLAINS PREHISTORY: A REVIEW

J. Roderick Vickers

# DOG DAYS IN SOUTHERN ALBERTA

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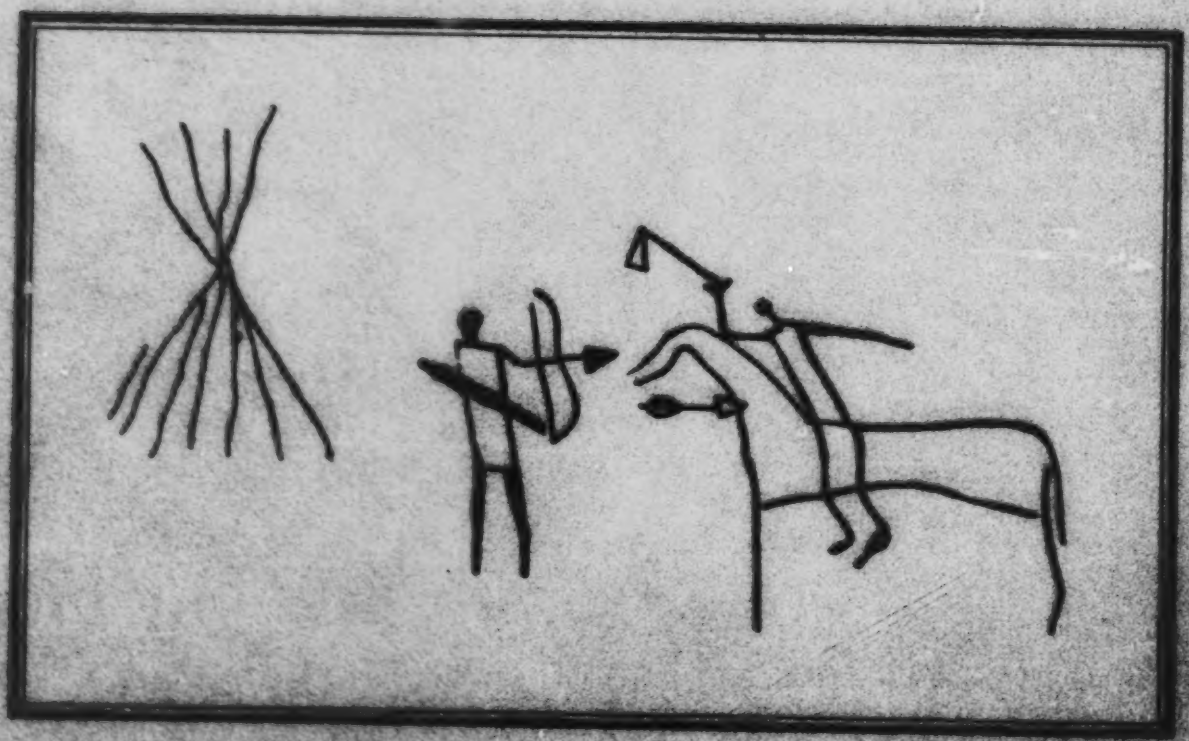

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# ALBERTA PLAINS PREHISTORY:

# A REVIEW

By

J. Roderick Vickers

Archaeological Survey of Alberta

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ABSTRACT

The prehistory of the Alberta Plains spans at least 11,000 years. Archaeologists have discerned changes in artifact styles which allow this long record of human habitation to be divided into periods and phases/complexes. The periods document changes in weapon technology while the phases/complexes reflect style changes through time. Archaeologists have interpreted these changes in various ways which are explored in this manuscript.

A brief history of archaeology in Alberta is presented and the Plains region of the province is described. Classificatory systems for organizing Plains prehistory are reviewed. The possibility of a mid-Wisconsin occupation, and the implication of the Late Wisconsin ice-free corridor are considered. The problem of megafauna extinction and over-hunting is briefly examined.

The paleocultural sequence is presented chronologically from early to late, and the phase/complex constructs are described. Site examples drawn from the Alberta record are briefly discussed. Various interpretations are compared with the Alberta record. Some major problems are reiterated and discussed in the conclusion of the volume.

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## INTRODUCTION

This paper is a review of the cultural historical sequence used to organize Alberta Plains prehistory. My interest is not so much with the sequence per se, as with the cultural relationships which have been proposed to account for the sequence. As far as possible, I have tried to maintain a very provincial viewpoint, examining the issues and the data base from an Alberta perspective. My focus is thus quite narrow, although it is, of course, embedded within the context of Northwestern Plains prehistory.

This diachronic approach does not provide a complete view of current research in plains archaeology. It neglects studies such as atemporal adaptive models (e.g., Arthur 1975; Losey 1978; Morgan 1979) or settlement models (e.g., Brumley 1983; Wright, Poole and Balcom 1984), and research oriented towards specific phenomena such as tipi rings (e.g., Finnigan 1982; Quigg and Brumley 1984), lithic reduction (e.g., Losey 1971; Young and Bonnichsen 1977), lithic sources (e.g., Loveseth 1976) and so forth, except insofar as these illustrate some aspect of culture history. Ultimately, these studies will greatly influence our view of prehistory and will provide a wealth of comparative material.

This review begins with a brief history of Alberta archaeology, and an overview of the region. Then, various schemes used to organize prehistory are described. Throughout the paper, environmental reconstructions are discussed as necessary. The main body of the text is organized chronologically through a system of named phases or complexes defined by "diagnostic" projectile point types. Some site examples drawn from the Alberta record are described, and comments are made on phase interpretation. I have tried to juxtapose conflicting interpretations, make critical comments, and indicate areas where problems exist. It is my contention that all interpretive models of Alberta Plains prehistory require constant re-examination, either for verification or rejection.

Since this review is structured around phase-assigned sites, the Alberta record was examined to extract sites which have yielded diagnostic projectile points. Sites which have dubious diagnostic artifact associations (e.g., the Bayrock Site [Wormington and Forbis 1965:116]) or where conflicting identifications have been made (e.g., the Lindoe site [Bryan n.d., 1980:98]) have been excluded from discussion, as

have those radiocarbon dated sites which lack diagnostic artifacts. Again, the reader is advised that this is not a comprehensive review of Alberta archaeology; for that, I recommend reference to Wormington and Forbis (1965) and to the Occasional Paper series of the Archaeological Survey of Alberta.

The data base includes about 15,000 site inventory forms, some hundreds of manuscript reports on file at the Archaeological Survey of Alberta and the published literature. However, this data base is not amenable to rigorous searching nor, due to a lack of descriptive consistency, can trait comparisons be made at other than a general level. Thus, although I have provided site frequencies and distribution maps for the various phases, I have undoubtedly overlooked some sites. Despite this, I think that the results are generally correct; that is, that the indicated frequencies and distributions more or less approximate the actual numbers and distributions of sites on record. While an annotated list of sites would be useful for Alberta researchers, it is beyond the scope of this project.

I have selected a number of sites from the data base to exemplify the Alberta record. Where possible, I have tried to describe recently excavated sites which have not been widely reported in the literature. Thus, some important sites which are well-known, are only briefly mentioned. In a few cases, major papers on newly discovered sites will shortly be published in companion volumes by the Archaeological Survey of Alberta, and are not discussed in detail here. Of course, some well-known sites remain the only adequate examples from certain periods and cannot be neglected. The professional archaeologist will find some new data here, as well as some old favorites. For the lay reader, or those less familiar with Alberta archaeology, the references cited in this volume should point the way to further reading.

Lastly, I should note that I have included line-drawings of projectile point type specimens for those unfamiliar with the forms. Single examples in no way indicate the range of variation which may be subsumed under named types. The reader is referred to Dyck (1983) for further illustrations which indicate some of the variability present, and to Wormington and Forbis (1965) for photographs of Alberta specimens. The provenience of illustrated specimens is listed in Table 1.

ARCHAEOLOGY IN ALBERTA

It was not until 1955 that a systematic programme for the study of Alberta archaeology was initiated under the auspices of the Glenbow Foundation (Wormington and Forbis 1965:1). The initial roster of professional archaeologists - W.L. Bliss, Junius Bird, Boyd Wettlaufer, Thomas Kehoe, Douglas Leechman, Marie Wormington, William Mulloy, E. Mott Davis, Henry Irwin - demonstrated that valuable archaeological data were present in the province. By 1957, Richard G. Forbis, often called the father (or godfather) of Alberta archaeology, was established with the Glenbow Foundation as the first, full time resident archaeologist in Alberta. In 1963, Alan Bryan and Ruth Gruhn joined the faculty of the University of Alberta (Edmonton), while Forbis joined the faculty in Calgary. In 1964, the first Department of Archaeology in Canada was established at Calgary with Richard S. MacNeish as Chairman. The culmination of the initial archaeological investigations was the publication of An Introduction to the Archaeology of Alberta, Canada by Wormington and Forbis (1965), only twenty years ago.

The direction of archaeology in Alberta, firmly established as a traditional academic pursuit in the period 1963-1973, changed radically with the passage in the provincial legislative assembly of the Alberta Heritage Act (now the Historical Resources Act) in 1973. In essence, the Act defined all in situ archaeological material, whether on public or private lands, as the property of the Crown. To protect those historical resources, the Archaeological Survey of Alberta was formed and the principle of "proponent pays" became entrenched. That is, those developers who were likely to destroy archaeological sites were required to retain a consultant archaeologist to undertake impact assessments and mitigation, as appropriate. This led to the formation of private consulting firms committed to archaeology within a Cultural Resources Management framework. The rapid growth of this new industry paralleled the general economic boom of the 1970s and early 1980s and declined during the subsequent recession. Thus, the Archaeological Survey of Alberta issued only a few permits to undertake archaeological projects in the early 1970s, while over 200 permits were issued each year in the boom period, 1979-1981. This number has steadily declined since, and fewer than 100 permits were issued in 1985. In all, just over 1,500 permited

archaeological projects have been administered under the Historical Resources Act since 1973.

With the necessity of beating the bulldozer to the scene, impact assessment and mitigation work has absorbed the attention of the post-1973 generation of archaeologists. The funds available for salvage work, combined with stagnation of funding available for university research, has had an important impact on archaeological studies (see Forbis 1982). These have tended to concentrate on project-specific or phenomenon-specific goals, such as tipi ring research, which can be undertaken in the context of private consulting. Student endeavours have tended to focus on analysis of salvage derived data; there have been few research oriented field projects undertaken recently. As well, the advent of the "New Archaeology" shifted interest away from culture history studies during the 1970s.

The last real synthesis of Alberta Plains prehistory was that of Reeves (1969), undertaken near the end of the academic period of Alberta archaeology. While his framework has been updated (e.g., Reeves 1978a, 1983a), it still stands as the basic structure for interpreting the cultural historical sequence. In Fredlund's (1981) terms, it is the basis for the Calgary school's approach to prehistory. It is my hope that this review will encourage culture history studies and that the problems and contradictions of the topic will again seem of interest to students of Alberta prehistory.

## THE REGION

The term Northwestern Plains is traditionally used to refer to the short grass parts of Alberta, Saskatchewan, Montana, the Dakotas, and Wyoming (see Wedel 1961:23; Conner 1968:13). However, following Frison's (1978) well known work, the term has become synonymous with the intermontane basins of Wyoming. Much of the latter area is almost an extension of the dry Great Basin and required a human adaptation which was, at least at certain times, quite different from that of the buffalo hunting cultures of the rest of the Plains (ibid.:21). In order to differentiate clearly the regions, I have used the term Wyoming Basin to refer to the Wyoming sage brush area and Northwestern Plains to refer to southern Alberta, Saskatchewan, parts of Montana, Wyoming and the

Dakotas. This usage is consistent with Wedel's (1961:240) definition rather than Frison's (1978).

The southern half of the Canadian prairie provinces is well described by Gordon (1979) and Morgan (1979), while the human adaptation at the ethnographic present is especially well considered by Arthur (1975; see also Ewers 1958). Descriptions of the southern Alberta landscape (Jankunis 1972), grassland ecology (Coupland 1959; Smoliak 1956) and the Aspen Parkland (Bird 1961) are readily available (see also Moss 1983; Hardy 1967). I will provide only a brief sketch for those unfamiliar with Alberta.

The Alberta Plains are drained from west to east by three main river systems, consisting of (from south to north) the Milk River, the Oldman-Bow-South Saskatchewan rivers and the Red Deer River (Figure 1). The Milk River is part of the Missouri-Mississippi drainage system, while the others form the Saskatchewan River system which flows into Hudson Bay. The river valleys are deeply entrenched and often contain wooded flats. A number of extinct glacial spillway channels, the major "coulees" of the region, are as deeply incised but are generally bereft of wood and carry little water. The Plains vary from flat, featureless glacial lake beds to pronounced rolling moraine, and are interrupted by major uplands. These include the Cypress, Wintering, and Hand hills. The uplands are generally treed on their northeastern slopes. The best descriptions of the region prior to extensive Euro-Canadian settlement are probably those of Palliser in 1859 (Spry 1968) and, especially, Dawson (1884).

The Plains are bordered on the west by the forested foothills of the Rocky Mountains and on the north by the Aspen Parklands. The foothills vegetation belt becomes very narrow near the United States border, and two major re-entrants of grassland penetrate the mountains at Waterton (the so-called Pass Creek Valley) and the Crowsnest Pass. The Aspen Parklands between the Red Deer River and the North Saskatchewan River are a mosaic of xeric grasslands, mesic grasslands, and aspen groves. In general, open country extends to the Battle River and further north along the eastern edge of the province, but local topography exerts strong influences on the vegetation and the parkland zone is complex.

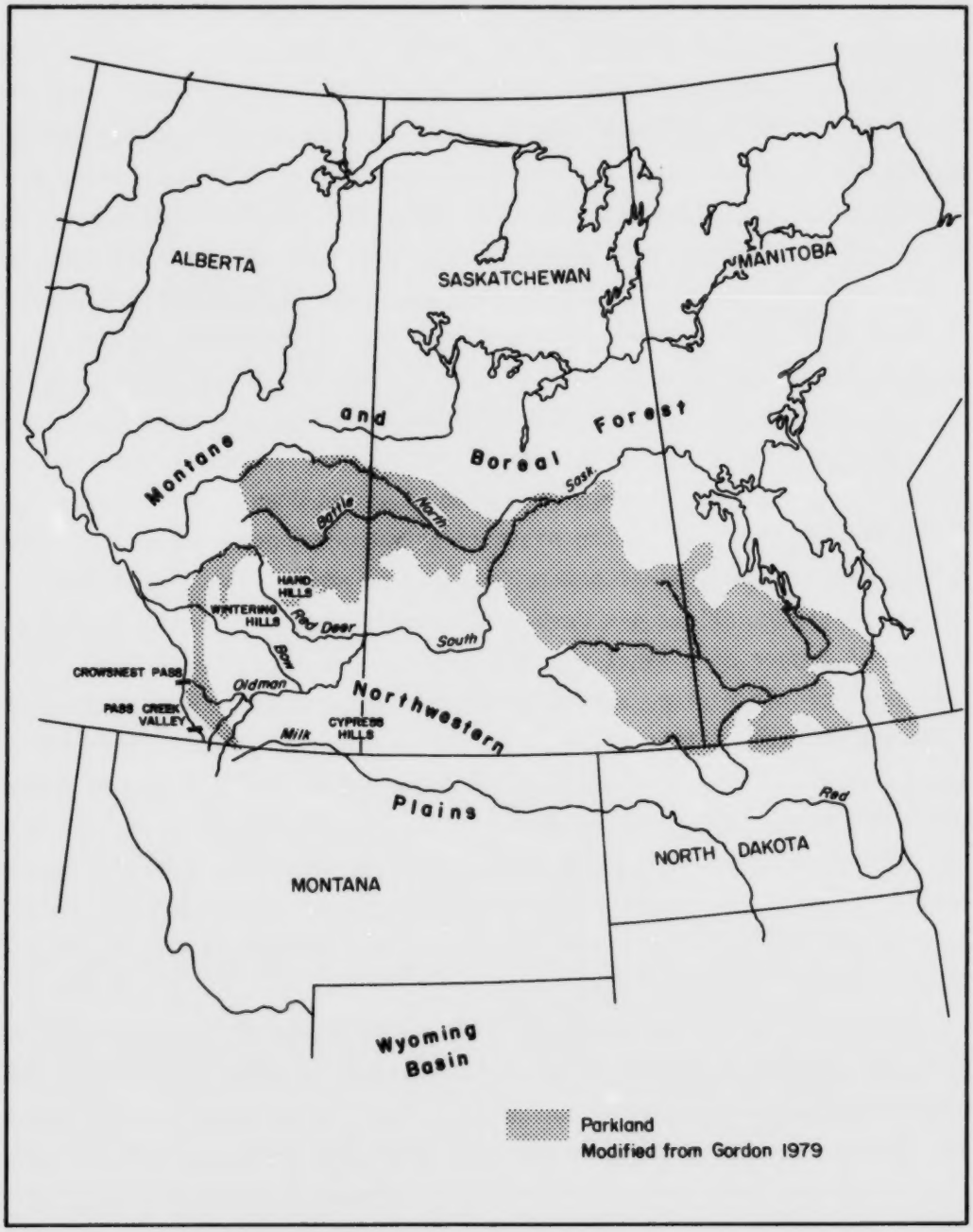



Figure 1. Alberta and the Northwestern Plains.

Details of climate and weather can be found in sources already cited, while summaries are available in Hardy (1967) and Government of Alberta and The University of Alberta (1969). Briefly, the Plains region can be characterized as one with extremes of winter and summer temperature, little moisture, and high winds. In the area south of the Bow - South Saskatchewan rivers, mean January temperatures are about -12°C, while north of this area, they are -18°C. July mean temperatures range from about 27°C in the southeast to 24°C northwards and along the foothills. Wind is very frequent and generally strong from the southwest, west, and northwest but rare from the northeast. Precipitation ranges from a mean of 18 cm in the southeast to 25 cm in the northwest. Most precipitation falls as rain in the spring (May-June). In general, rainfall decreases from west to east.

The averages noted above give a misleading view of southern Alberta. Extremes in temperature and precipitation vary from year to year as well as by the seasons. For example, in the southeast, maximum/minimum temperatures of 42°C and -46°C have been recorded. Precipitation extremes range from 15 cm to 71 cm in the same area. Chinooks - warm, dry winds from the mountains - can, according to Longley (1967:55), raise the temperature 22°C in ten minutes, and blow out just as fast. Snow has been reported in every month of the year except July.

## SEASONAL ROUND

The physical environment, not surprisingly, influenced the seasonal round of the Alberta Plains Indians (see Arthur 1975; Brumley 1983; Morgan 1979; Ewers 1958; Graspointner 1981). Without going into great detail, the following schedule has been postulated:

1. Winter (November/December-March): Occupation of the forested valley bottoms, foothills and parklands; great degree of sedentism; subsistence by both stalking and communal hunting of bison; dried meat supplements. Both aggregation and dispersion of population occurred.
2. Spring (April-May/June): Removal from winter sites to valley edges to take advantage of sunlight, dry slopes, etc. Both stalking and occasional communal hunting are postulated. Mobility would be a function of weather.

3. Summer (June/July-August/September): Great mobility, especially while water is available in sloughs. Dispersed camps occur in broken topography suitable for stalking bison. There was probably population aggregation for ceremonial purposes at certain times. Most sites thought to represent this season are small, scattered tipi ring encampments distant from water and wood.
4. Fall (October-November): Removal from the now dry plains to mesic environments, where activities include preparation and conduct of major communal kills, and preparation of dry stores. Movement to winter camp locales occurred late in this period.

I present this brief summary mainly to note that site location strongly, and usually implicitly, influences assignment of site seasonality where indicator faunal specimens are not recovered. Details of the arguments can be found in the references cited above.

## ORGANIZING PREHISTORY

> The cultural sequence in much of northwestern North America has been developed largely on the basis of projectile points. The use of only one artifact category can be justified in many instances because projectile points change technologically and stylistically over relatively short time periods, while other formed artifacts do not undergo the same changes (Driver 1978:94).

The first organizational scheme applied directly to the Alberta Plains was devised by Wormington and Forbis (1965). They rejected extending Mulloy's (1958) system to the province, in part because it included "... such confusing and contradictory terms as Late Early Prehistoric and Early Late Prehistoric" (Wormington and Forbis 1965:13). Instead, the terms Paleo-Indian, Meso-Indian, and Neo-Indian were introduced to identify the main cultural stages of Plains prehistory. These stages were primarily chronological organizing devices with no evolutionary or adaptive implications. This system has not generally been adopted and Mulloy's scheme, with modifications, is now commonly used in Alberta; it will be described in detail later.

Following the publication of Frison's (1978) overview of Wyoming archaeology, his Wyoming Basin chronological organization has been occasionally applied to the Alberta Plains (Figure 2). This system classifies prehistory into five periods: Paleo-Indian, Early Plains Archaic, Middle Plains Archaic, Late Plains Archaic, and Late Prehistoric. Doll (1982) has further proposed the term Pre-Archaic as a transitional period between the Paleo-Indian and Early Plains Archaic Periods. Use of this system in Alberta is primarily by archaeologists who are not adherents of the "Calgary school" of Plains archaeology (see Fredlund 1981).

The application of the Wyoming Basin system to Alberta has been strongly opposed because the term Archaic has adaptive connotations - an economic orientation of multiple resource exploitation - which seems inapplicable to the bison-oriented economy of the Northwestern Plains (Forbis 1968a:39; Reeves 1983a:1, 1985). Indeed, even Frison (1978) suggests that the term is not appropriate for our region; noting that the Wyoming Basin is resource-deficient, he states:

> The area is not "plains" in the same sense that the Northern Plains and the Central Plains are considered plains. There were a few local spots rich enough in terms of plant and animal resources to have supported a true hunting economy comparable to the Northern Plains but many more spots were relatively marginal and required close attention to gathered resources. As a result the prehistoric economic adaptations of the Northwestern Plains [Wyoming Basin] fit into an Archaic way of life perhaps more so than that of plains hunters who are traditionally regarded as more oriented economically toward procurement of large game animals (Frison 1978:21; brackets mine).

Accordingly, the Wyoming Basin system will not be used in this paper.

Mulloy's (1958) framework has been modified by Reeves (1969, 1973a, 1978a, 1983b), Byrne (1973), and Forbis (1982) to reflect the increased data base now available. The changes include the addition of a Pre-Projectile Point Horizon (Forbis 1982:161), redefinition of the Middle Prehistoric Period into Early Middle Prehistoric I and II and Late Middle Prehistoric (Reeves 1973a, 1983a:36), and a reconsideration of the Protohistoric Period chronology (Byrne 1973:441). Variations in projectile point styles, which are thought to reflect changes in weapon technology, form the basis for the classification. That is, the periods are defined on the basis of technological change rather than chronology sensu stricto, a concept apparently misunderstood by Foor (1985:133) in his otherwise useful comparison of Northwestern Plains classificatory systems. To some extent, the scheme is modified by data gaps, environmental change, and other artifact traits such as ceramics and European trade goods.

## THE PALEOCULTURAL SEQUENCE

The sequence of broad periods defined below is used in this paper as the main organizational device (Figure 2). The divisions of Early, Middle and Late Prehistoric reflect, at least in theory, the use of the spear, the atlatl and dart, and the bow and arrow, respectively. In reality, one should probably define the periods on the basis of projectile point design - large lanceolate, medium notched/stemmed and small notched/triangular - since the weapon system is inferred rather than demonstrated. In effect, this broad periodization should be regarded more as a heuristic device than a developmental scheme.

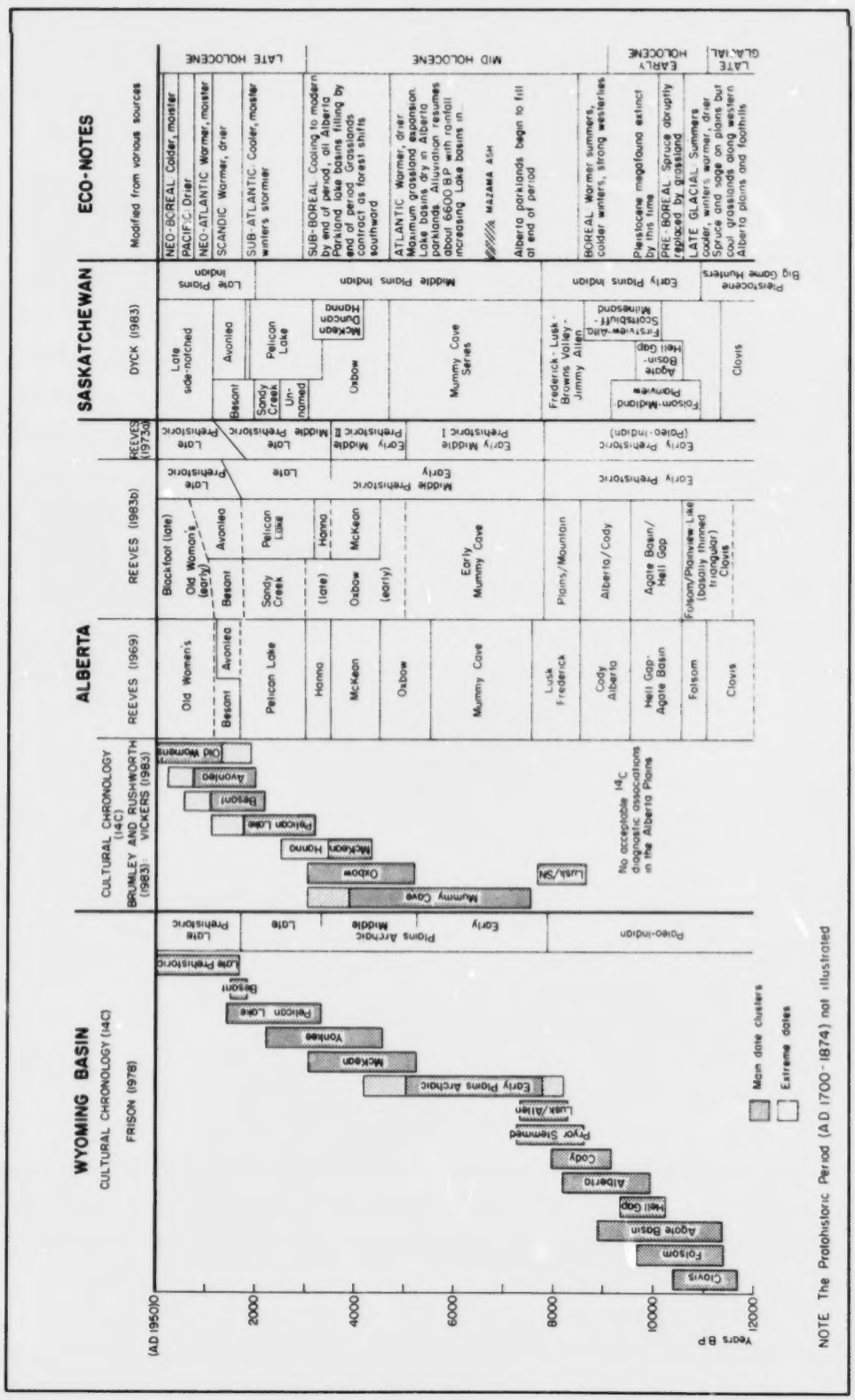



Figure 2. The Paleocultural sequence.

The cultural sequence, and the projectile point types or cultural complexes subsumed by each period, are:

1. Pre-projectile Point Horizon (+11,500 B.P.) - This period is simply a rubric to handle the possibility of pre-Clovis or "Early Man" discoveries in the New World (Krieger 1962, 1964; Willey 1966:29) and the data base for this time period in Alberta is, at best, minimal.

2. Early Prehistoric Period (11,500 B.P.-7,500 B.P.) - This period is characterized by large, lanceolate projectile points thought to have been hafted to heavy, stabbing spears. Complexes included are Clovis, Folsom, Agate Basin, Hell Gap, Alberta, Cody, Frederick, and Lusk.

3. Middle Prehistoric Period (7,500 B.P.-1,750/1,250 B.P.) - This period is characterized by medium sized, notched or stemmed projectile points thought to have been hafted to darts propelled by atlatls. The period is further divided into:
   a) Early Middle Prehistoric I (7,500 B.P.-5,000 B.P.) - This is characterized by the Mummy Cave Complex (Bitterroot, Salmon River point types) and subsumes the Altithermal (Hypsithermal, Atlantic) climatic episode and cultural units of that time (Reeves 1973a).
   b) Early Middle Prehistoric II (5,000 B.P.-3,500 B.P.) - This is characterized by Oxbow, McKean, and Late Mummy Cave materials (Reeves 1973a).
   c) Late Middle Prehistoric (3,500 B.P.-1,750/1,250 B.P.) - This includes Pelican Lake and Besant complexes. Reeves (1983a:37) also includes a Hanna Phase.

4. Late Prehistoric Period (1,750/1,250 B.P. - 250 B.P.) - This period is characterized by small, notched or triangular projectile points thought to have been hafted to arrows propelled by bows; Avonlea and Late Side Notched points are included.

5. Protohistoric Period (250 B.P.-76 B.P.) - This period is characterized by the addition of European trade goods to the Late Prehistoric material culture and, ultimately, the replacement of the latter by trade items (Byrne 1973).

The dates listed above for the periods should be considered approximate. It must also be noted that there are a number of problems with this model, especially in the transitions between periods where points representative of more than one technological tradition may occur in association with each other. As well, so few intact sites are known for the Early Prehistoric Period in Alberta (Figure 3) that the cultural complexes assigned to the period are primarily projected from American Plains data. These problems are discussed later in this essay. Reeves (1983a:30ff, 1985) provides a historical review of earlier organizational schemes.

## Phases, Subphases, Complexes and Traditions

Within each major period are a number of cultural units designated as phases or complexes. In his first synthesis, Reeves notes:

> The following sequence is divided either into complexes when the relationship is unclear between the sequent assemblages, or into phases when the relationships are discernible between the serial assemblages. The latter are linked by cultural traditions. Projectile point types are the primary identifying criterion [sic] for the complexes or phases (Reeves 1969:19).

The phase concept was derived from Willey and Phillips (1958) who defined it as:

> ... an archaeological unit possessing traits sufficiently characteristic to distinguish it from all other units similarly conceived, whether of the same or other cultures or civilizations, spatially limited to the order of magnitude of a locality or region and chronologically limited to a relatively brief time (Willey and Phillips 1958:22).

Reeves (1983a:39) subsequently modified the phase definition by removing the geographical limits from the definition; thus a phase could occupy environmentally distinct areas, or different areas through time. Reeves appears to use the subphase as his geographical expression of a phase, stating: "Subphases are divisions of a phase useful in studying the internal variation within a phase ..." (ibid.:39). Named subphases are

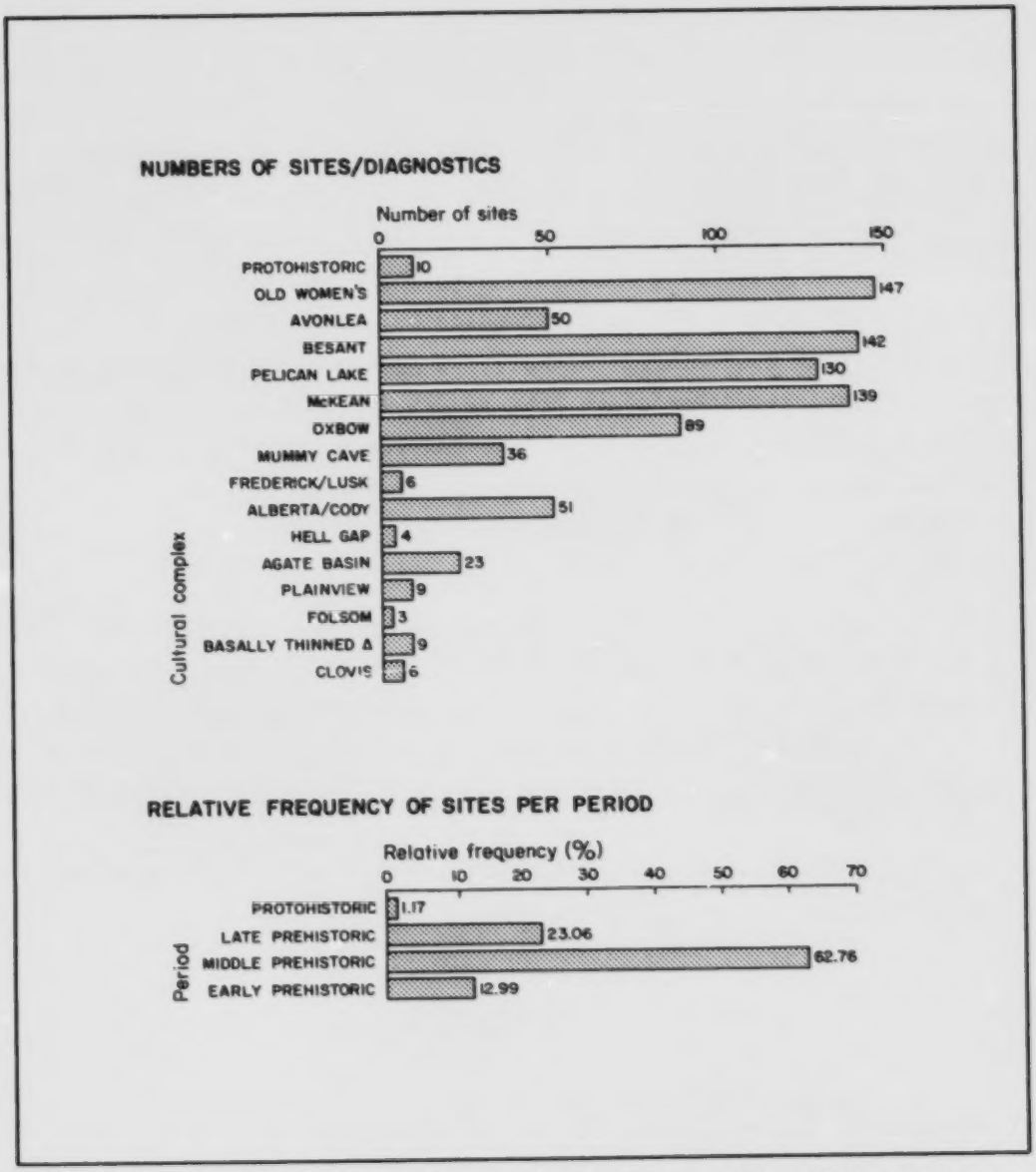



Figure 3. Frequencies of phase-assigned and period-assigned sites in Alberta.

rarely used in the Plains (cf. Brumley 1975; Reeves 1983a), but are commonly used in discussions of the mountain sequences (e.g., Driver 1978; Reeves 1983a).

The term "complex" is used by Reeves, as already noted, for a phase which cannot be linked into a cultural tradition; its antecedents and descendants are unknown, or at least undemonstrated. I should note that this is not the same definition used by Dyck (1983:69); his complex is more or less equivalent to Reeves' subphase. The use of the term complex has increased in popularity, but this represents no great increase of taxonomic rigor.

Reeves (1983a:40) defines tradition as persistent configurations in cultural systems which link phases through time. The cultural tradition thus represents continuity in a variety of cultural expressions - artifacts, technology, settlement, subsistence, etc. Only two traditions have been proposed in Alberta Plains archaeology: TUNAXA and NAPIKWAN. TUNAXA links the McKean, Hanna, Pelican Lake, and Avonlea Phases, while NAPIKWAN links the Besant and Old Women's Phases (Reeves 1969, 1983a). There has been some modification to the cultural tradition scheme which will be discussed later.

The cultural units defined above are those commonly used in Alberta Plains prehistory and, to some extent, in the adjacent Plains provinces and states. Fredlund (1981:40) has characterized this approach to prehistory as the "Calgary school" and contrasts it with the "Wyoming school":

> Frison and the Wyoming school have been inclined to build upon the data base with caution about implications concerning overall regional and cultural ties. Reeves (1970), as an example of the Calgary school, speculated on population movements and intergroup associations based on few well-documented sites and relying heavily on projectile point typology and seriation (Fredlund 1981:43).

Although Fredlund has exaggerated the positions, I think she has identified correctly the existence of two schools or approaches to Northwestern Plains prehistory. The Calgary school is synonomous with B.O.K. Reeves and some of his colleagues and students. While not all faculty at the University of Calgary are necessarily adherents of the Calgary school, the term is a useful rubric. It should therefore be

noted that the cultural units defined previously are those of the Calgary school and do not necessarily correlate with the same terms used elsewhere.

## PALEOECOLOGY

Environmental conditions are extremely important in any consideration of human adaptation, and interpretation of culture change in prehistory is often linked to environmental change. Therefore, most recent studies of Northwestern Plains prehistory provide a paleoecological sequence juxtaposed with the paleocultural sequence (see, for example, Buchner 1980; Dyck 1983; Reeves 1969; Syms 1977). The Blytt-Sernander sequence of climatic episodes, developed in Europe around the turn of the century (Flint 1971:25, 389), has been most commonly used by archaeologists. The current interpretation suggests that the episodes represent quasi-steady state climatic regimes with very rapid transitions between the episodes (Bryson and Wendland 1967; Bryson et al. 1970).

An abbreviated version of the Blytt-Sernander sequence is illustrated on the chronological chart (Figure 2). This interpretation is based primarily on Dyck's (1983:65-68) compilation for Saskatchewan, but also takes into consideration the lake level data of Schweger et al. (1981), the early non-arboreal pollen assemblage of Mott and Jackson (1982), and the reconstruction derived from faunal data by Wilson and Churcher (1978) and Wilson (1983).

The causal mechanism for climate change is based primarily on the Milankovitch theory (see Flint 1971:798ff; Covy 1984; Denton and Hughes 1983; H.E. Wright 1983). The latter invokes shifts in the position of perihelion, orbital eccentricity, and planetary axis tilt to produce a non-periodic insolation curve. This predicts that the latitudinal distribution of solar insolation on the Earth's surface changes in a continuous rather than step-wise manner. Some initial confirmation of the theory was obtained by Ritchie et al. (1983) who discovered that the predicted high latitude solar maximum at 10,000 B.P. was evinced in pollen cores from the Mackenzie delta area. This is rather earlier than the Atlantic warm period of the Blytt-Sernander sequence, presumably since northwestern North America was upstream of the remnant Laurentide ice sheet (ibid.:2). As Schweger notes:

> Well documented and dated pollen sequences from western Canada make it clear that we can no longer assume a thermal maximum during mid Holocene times... [Milankovitch theory] and the climatic effects of the waning continental ice sheet combine to produce a complex Holocene paleoclimatic record that differs from place to place. It is only by establishing local independently dated paleoclimatic records that an accurate picture of Holocene paleoclimatology can ever be established (1984:5; brackets mine).

Thus, if climate change is a time and space transgressive interaction of solar radiation and residual Laurentide ice effects, the episodic Blytt-Sernander system is over-simplified. This suggests that the magnitude and direction of climatic regimes may be nonsynchronous across the Canadian Plains, and, in the absence of direct paleoecological data from the Alberta Plains, a variety of conflicting environmental reconstructions is possible. This limits the utility of general climatic models when one attempts to reconstruct man-land relationships in Plains prehistory.

## THE EARLIEST OF MEN

> Unfortunately, we are not in a position to say when men first entered the New World (Wormington and Forbis 1965:11).
>
> The initial entry of humans into the New World remains one of the major unsolved problems of American archaeology (Fladmark 1983:13).

There is no general agreement on when man first entered the New World. No pre-Clovis site from the Americas south of the area occupied by the continental glaciers is universally accepted. Most archaeologists admit the possibility of pre-Late Wisconsin man, and provide a period such as the "Pre-projectile Point Horizon" (Forbis 1982:69) or "Pleistocene Hunters Period" (Dyck 1983:69) to accommodate future discoveries. However, the current evidence remains in dispute. As Morlan and Cinq-Mars note "... recent reviews of early man in the Americas ... bear little resemblance to one another although each purports to be an adequate summary of existing evidence" (1982:354). A cross-section of opinion on this topic is readily available in the literature (see Bryan 1978; Dyck 1983; Griffin 1979; MacNeish 1978; Morlan and Cinq-Mars 1982; Reeves 1984; Rutter and Schweger 1980; Stanford 1982; Shutler 1983; West 1983). I shall review the issue only as it applies to Alberta.

### MID-WISCONSIN MAN

There seems little doubt that the mid-Wisconsin was a time of extensive glacial retreat from the maximum ice stand of the Early Wisconsin. The period, ca. 60,000-25,000 years B.P., would have posed few problems for the occupation of Alberta (Stalker 1980). Fladmark (1983:18) suggests that, despite a cooler climate, no glacial barriers existed which would have precluded human habitation of western and central North America. However, if boreal forest was extensive, it may have posed a significant adaptive challenge to early immigrants (ibid.).

The Stalker site (DlPa-4), also known as the Taber Child site, has been commonly cited as evidence for pre-Classical Wisconsin human occupation of the province (Langston and Oschinsky 1963; Lorenzo 1978; Stalker 1969; Wormington and Forbis 1965). These few human bones

recovered from the east bank of the Oldman River near Taber have been variously estimated to date between 18,000 and 60,000 years ago (Stalker 1969, 1977). Re-investigation of the site suggests a rather different conclusion. Since the site is so frequently reported as firm evidence for early man in North America, a brief review is necessary.

The Stalker Site (DlPa-4)

In 1961, members of a geological field party led by A. MacS. Stalker discovered the fragmented remains of a human child on the east bank of the Oldman River about 6 km north of Taber (see Figure 6; Stalker 1969, 1983). The remains consisted of portions of the cranium, mandible, right clavicle, left scapula, left femur, two ribs and three vertebrae (Langston and Oschinsky 1963; cf. Moffatt and Wainwright 1983:224). The apparent geological context of the discovery, below two or three tills, suggested an age variously estimated as greater than 18,000 to 60,000 years before present (Stalker 1969, 1977). Despite the early date, the discovery has had relatively little impact on New World prehistory since, as Wormington and Forbis noted, "... the critical features had not developed on the skull, as the individual was no more than a baby when it died, and there were no artifacts found in association, so the find is of limited anthropological value" (1965:117). Thus, while the discovery appeared to indicate that man was present at an early time, it said nothing at all about the type of man or his cultural baggage.

In 1978 and 1979, Richard G. Forbis and Michael Wilson of the University of Calgary began to re-investigate the site. As well, scientists of the National Museum of Man, the Canadian Conservation Institute, and Atomic Energy of Canada Ltd. conducted a number of tests on the skeletal elements themselves. The results of this cooperative effort may be summarized as follows:

1. Wilson was able to demonstrate that the discovery location was cut and filled by Holocene mudflow channels and that the channel deposits mimicked the surrounding Pleistocene stratum such that they could not be differentiated without extensive excavation; he concluded that the bones could well have been derived from a recent matrix (Wilson, Harvey, and Forbis 1983).

2. Wilson and Harvey were able to demonstrate by x-ray diffraction analysis that soil samples scraped from the Taber bones more closely resembled the Holocene mudflow deposit than the Pleistocene sediments (ibid.:203).

3. Scientists of Atomic Energy of Canada Ltd., using the new accelerator dating method, secured a radiocarbon date of 3,550±500 years B.P. on the bone (Brown et al. 1983:236).

4. Scientists of the Canadian Conservation Institute were able to demonstrate that the protein content of the Taber bone more closely resembled Holocene burials than bones from Pleistocene deposits (Moffatt and Wainwright 1983:229).

Although accepting this, Forbis (1982:161) warns that all of these arguments can be attacked on various grounds, and Stalker (1983) appears unwilling to change his original interpretation, it would seem that the balance of evidence now suggests that the burial is recent and a Pleistocene ascription is no longer acceptable. Surely, for any site to be assigned the age suggested for the Stalker site, it must, like Caesar's wife, be above suspicion.

## LATE WISCONSIN ICE-FREE CORRIDOR

The glacial advance of the Late Wisconsin constricted or eliminated a land connection between Beringia and lower North America. If man was not yet present in the lower continent, then the extent of the ice-sheets, the habitability of the environment along the ice-free corridor, and the chronology of glacial retreat, become critical issues in the timing of man's entry (see Fladmark 1983; Clark and Clark 1983). If the Clovis complex represents even a diffusion of bifacial technology from Beringia, the corridor must have been open minimally by about 12,000 years B.P. Since the southern terminus of the corridor was in the foothills and plains of Alberta, the potential for discovery of archaeological sites from this period is related to the extent and chronology of the Late Wisconsin glaciation.

Subsequent to Prest's (1969) reconstruction of extensive coalescence of Laurentide and Cordilleran ice at ca. 15-17,000 years B.P. (Figure 4A), Reeves (1973b) examined the evidence for ice limits in the western interior. Reeves (ibid.:6) suggests that the major Lethbridge end

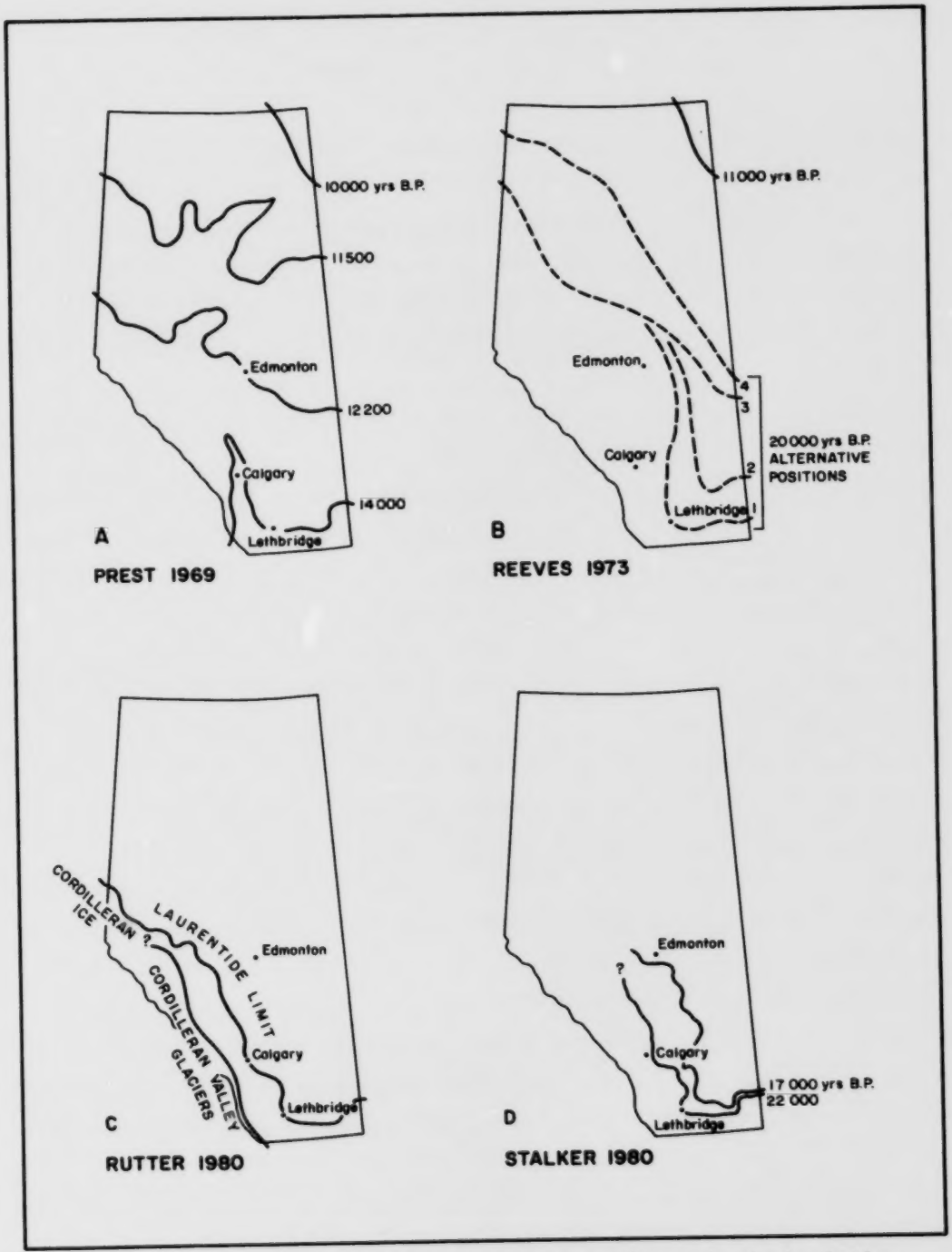



Figure 4. Ice margins and isochrons of Late Wisconsin deglaciation.

moraine (Figure 4B, position 1) can date no later than ca. 18-20,000 years B.P., or may even represent an Early Wisconsin or Illinoian advance. The maximum Late Wisconsin advance is thought to lie to the northeast, perhaps correlative with Westgate's (1968) Oldman unit (Figure 4B, position 2). This position would have left much of southern Alberta ice-free, since it is thought that the latest Rocky Mountain valley glaciers did not advance past the front range. Only in the Athabasca Valley area was there evidence for coalescence of Laurentide and Cordilleran ice. Reeves (1973b:13) suggests that this could be either Late Wisconsin or Early Wisconsin/Illinoian in age.

Rutter (1980) considers the Lethbridge moraine to represent the maximum Late Wisconsin ice position (Figure 4C) and notes "... the surface west of the Lethbridge moraine well into the mountains is older than Late Wisconsin" (ibid.:2). Rutter (ibid.) further correlates the Erratics Train advance with the Early Wisconsin, thus suggesting that the ice coalescence in the Athabasca Valley was pre-Late Wisconsin. Coalescence is thought to have occurred somewhat further north in Late Wisconsin times, probably as a result of the proximity of a massive Cordilleran ice sheet located in the Rocky Mountain trench (ibid.:5).

Stalker (1980) posits two separate Late Wisconsin maxima, one at about 22,000 years B.P. and the other at 17,000 years B.P. The older is correlated with the Lethbridge moraine, whereas the younger advance terminated somewhat northeastward (Figure 4D). He further suggests (ibid.:13) that an ice-free corridor existed in the Middle Wisconsin before ca. 20,000 years B.P., and after ca. 14,000 years B.P.

Denton and Hughes (1981:99ff) discuss the problems of the Late Wisconsin ice margin locations in the west, noting that "... the outer limits and chronology of Late Wisconsin Laurentide and Cordilleran drift sheets remain somewhat speculative, largely because pertinent radiocarbon dates are rare" (ibid.:99). Despite a careful review of the data, they felt it necessary to model both extensive coalescence and no coalescence states due to the implications that the problem had for reconstruction of the Cordilleran ice sheet size; their intermediate reconstruction is shown in Figure 5A. They further note (ibid.:102) that the problems of ice limits and the ice-free corridor remain to be resolved.

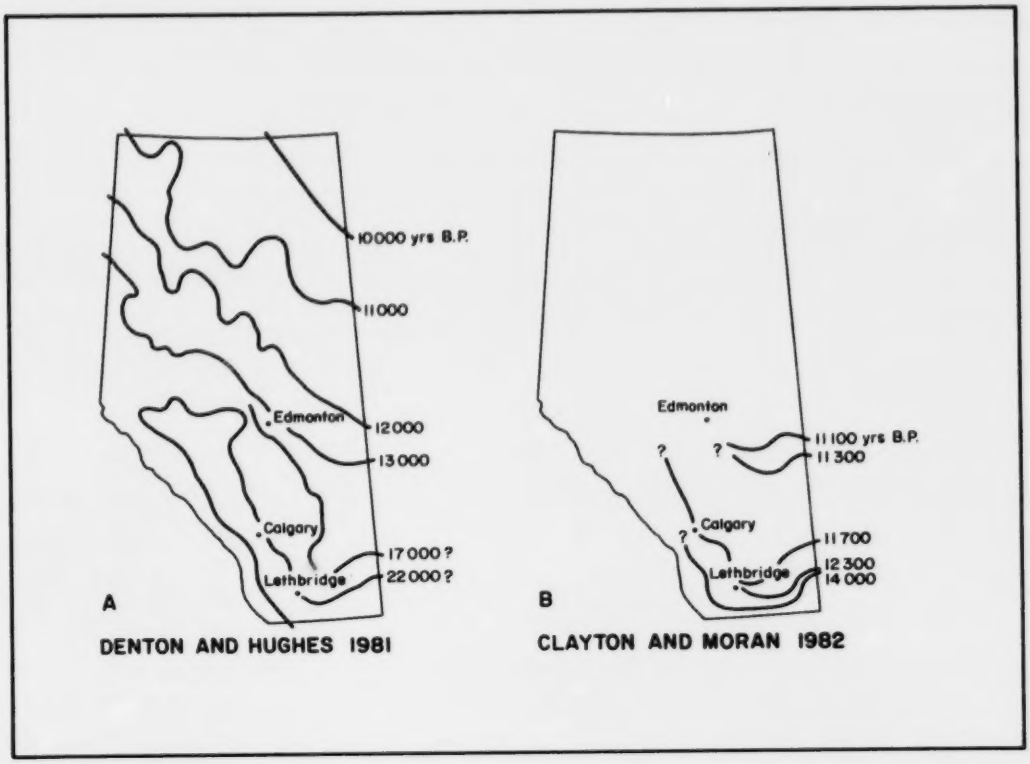



Figure 5. Ice margins and isochrons of the Late Wisconsin deglaciation.

The uncertainty of Denton and Hughes (1981) concerning ice limits and chronology is reflected in the Clayton and Moran (1982) reconstruction (Figure 5B). The latter reject all non-wood radiocarbon dates on the basis of possible contamination of fine sediments by Paleocene lignite and Cretaceous black shale fragments. They argue that the Lethbridge moraine was the limit of a major advance, but believe that:

> ... the freshness of the glacial landforms beyond this margin, combined with interlocking drainage relationships that require the presence of stagnant ice west of margin AL5 [Lethbridge moraine] while the active ice was at AL5, indicates that the Late Wisconsinan limit was further south (ibid:65; brackets mine).

Their 20,000 years B.P. ice margin position (ibid.:52) is drawn south of the province save for a minor re-entrant near the Cypress Hills (see also Christiansen 1979:923). The Lethbridge moraine is instead assigned to

their Phase I, dated ca. 12,300 years B.P. (ibid.:70). This interpretation is not without controversy (Jackson 1983; Moran and Clayton 1983, 1984; see also Jackson 1984).

As must be obvious, geological interpretation of the extent and chronology of the Late Wisconsin Laurentide advance in southern Alberta is highly speculative (see Fenton 1984:64). Until more radiocarbon dates are secured, it seems unlikely that an adequate understanding of the Late Wisconsin glaciation in southern Alberta will be achieved. Only extensive geological fieldwork is likely to resolve these problems, and the matter will remain in dispute for some years to come.

It has been demonstrated that, at least in pre-Late Wisconsin times, the maximum advance of Cordilleran and Laurentide ice in southern Alberta was nonsynchronous. Both the till sections and the glacio-lacustrine deposits indicate substantial recession of the Cordilleran valley glaciers prior to the Laurentide maximal advance (e.g., Alley 1973; Alley and Harris 1974:1234). If this condition was also true for the Late Wisconsin, it seems likely that the foothills and adjacent valleys could have been occupied at a relatively early date. This suggests that, on glacial evidence alone, the foothills area holds more potential for the discovery of "Early Man" sites than the Plains proper.

## PLEISTOCENE EXTINCTIONS

The loss to North America of some 33 genera of large mammals at the end of the Late Wisconsin is one of the more dramatic events witnessed in the stratigraphic record (Martin 1984:360). The drama is enhanced by the nature of the beasts - mammoth and mastodon, horse, camel, giant sloth, and sabretooth cats, among others - whose loss has left the continental fauna depauperate. This extinction event appears to have been relatively rapid and most of the megafauna were gone by 10,000 - 10,800 years ago (Meltzer and Mead 1983:134). Occurring at a time of climatic amelioration, the event has seemed disharmonious and the search for a cause has engendered much interesting speculation (see especially Martin and Wright 1967; Martin and Klein 1984). The explanatory models can be divided conveniently into camps: those which emphasize human hunting, and those which emphasize environmental change.

Advocates of over-hunting generally argue that the ecological changes at the end of the Wisconsin should have increased megafauna biomass. For example, McDonald notes:

> The maximum limiting intensity of reduced continental land area, cooler air temperatures, simplicity of habitats, limited patchiness, lowest total primary productivity, and least availability of food resources were attained in late Quaternary North America about 20,000 to 18,000 yr B.P. ... The limiting intensity of most selective forces was relaxed after 18,000 B.P., and the associated environmental changes should not have produced the cluster of extinctions which in fact occurred (1984:432).

Large mammal mobility should have permitted the animals to cope with environmental change through migration (ibid.:416). As well, megafauna survival of previous glacial/interglacial cycles is seen to underline the late Pleistocene extinction event as highly anomolous (Martin 1984:367; Spaulding 1983:111). Only one new factor was present in North America at the time: man, or, at least, efficient hunting culture. As Haynes notes, "The extinction of the Pleistocene megafauna between 11,500 and 10,500 B.P. coincides so closely with the age of the Clovis culture that a possible cause-and-effect relationship has not escaped notice" (1984:351). Indeed, Martin (1984), in reviewing extinction around the planet, concludes "On a global scale the late Pleistocene extinction patterns appear to track the prehistoric movements or activities of Homo sapiens much more closely than any widely agreed-upon pattern of especially severe global climatic change in the late Pleistocene" (1984:396). It is possible to operationalize the overkill hypothesis in computer simulations (Whittington and Dyke 1984).

Opponents of the overkill model take two general approaches to the problem. One approach denies the uniqueness of the event, while the other supports an ecological/climate model. The latter, perhaps inspired by studies of the Beringian "productivity paradox" (see Hopkins et al. 1982), involves ingenious linking arguments between climatic change and eco-catastrophe.

Webb (1984) examines extinction rates over the last 10 million years, and recognizes six major extinction episodes. At least three of these appear to correlate with glacial terminations. He concludes that since

man was not present at the time of the earlier extinctions, he need not be considered a causal agent for the late Pleistocene extinction event.

Gingerich (1984), on the other hand, compares rates of extinction with rates of origination of species. He notes that "... origination rates appear to exceed extinction rates in the early Cenozoic during the explosive initial radiation of the three orders studied [Rodentia, Artiodactyla, fissiped Carnivora], but during most of the later Cenozoic origination and extinction proceeded at about the same rate" (ibid.:215; brackets mine). With origination and extinction rates in apparent equilibrium, late Pleistocene extinctions are seen as a natural consequence of high early Pleistocene originations. The latter, perhaps partly a function of a more detailed palaeontological record, is assumed to result from increased environmental heterogeneity during glacial intervals.

Other opponents of overkill tend to focus on the "coevolutionary disequilibrium" hypothesis in one form or another. This view emphasizes the complete shift in biotic community composition which occurred at the Pleistocene/Holocene boundary. As Graham and Lundelius explain:

> Environmental changes at the end of the Pleistocene caused a major biotic reorganization. Instead of simple shifts of biotic zones, individual species responded to these environmental changes in accord with their own tolerance limits ... In coevolved systems these changes would disrupt coevolutionary relationships between plants and animals, thus creating disequilibrium in the system (1984:243).

The result of this reorganization of biotic communities into the zoned Holocene communities was to reduce niche differentiation and increase competition among herbivores. The less fit then became extinct (see also Guilday 1984; Guthrie 1984).

Increased seasonality, that is, an increase in the extremes between summer and winter conditions, is viewed as a major cause of environmental disruption in the Holocene. This may have resulted in reduced ecological diversity and a shorter growth season for ungulates due to a decrease in the length of high plant protein production (Guthrie 1984:282). Increased biotic zonation would have reduced the nutrient diversity and increased detoxification problems for the animals (ibid.). As well, a narrowed favourable birth season may have affected the reproductive

success of large mammals, especially those with gestation periods greater than one year (Kiltie 1984). All of these effects suggest that climatic change could have brought about the extinction of the Pleistocene megafauna, perhaps with coup de grace administered by man (Guilday 1984).

In Alberta, the fossiliferous Bighill Creek Formation on the Bow River, and analogous deposits elsewhere, spans the period of megafauna extinction (Wilson and Churcher 1984). The gravels are thought to have originated through the early postglacial mass-wasting of formerly frozen unstable debris which was subsequently deposited downstream. The formation dates fall between 11,300±290 years B.P. (RL-757) and 10,200 ±280 years B.P. (GSC-3065), and it contains extinct mammoth, horse and camel (ibid.:161, 162). In an analogous deposit on the Peace River in northern Alberta, a bone collagen date of 9,880±130 years B.P. (GSC-2865) was obtained from a faunal sample of mammoth, wapiti, and bison (ibid.:167). Wilson and Churcher note that "... the relative paucity of material referable to Mammuthus suggests that this group ... could already have been reduced in numbers by 11000 yr BP" (ibid.:171).

In the Mosimann and Martin (1975) overkill simulation, man appears at the southern end of the ice-free corridor and expands rapidly throughout the continent; the area around Edmonton is the starting locale (see Whittington and Dyke 1984). The model thus implies that megafauna extinction should have occurred earliest in Alberta. The rather late dates for megafauna survival in Alberta suggest that the overkill hypothesis may eventually be rejected, although many more dated occurrences are necessary. In any case, it is apparent that deposits in Alberta contain data which will bear on the problem of Pleistocene extinction causality.

## EARLY PREHISTORIC PERIOD

Since Wormington and Forbis (1965) published their review of Alberta archaeology some 20 years ago, there has been little change in the data base for the Early Prehistoric Period in the Plains region of the province. This period remains primarily documented by surface finds of diagnostic projectile points (Forbis 1982; Pettipas 1980). Investigations in the mountain passes (e.g., Christensen 1971; Driver 1978; Fedje 1984), the foothills (e.g., Gryba 1983; Wilson 1983), the Parklands (e.g., Doll 1982; Ronaghan et al. 1983), and the northern forest (e.g., McCullough 1982; McCullough and Wilson 1982) have yielded little more information than the Plains proper. All these data are scanty, and we remain dependent on our American colleagues for much of our chronology and many of our phase constructs and interpretations.

## EARLY PREHISTORIC ENVIRONMENTS

A general reconstruction of the environmental conditions obtaining during the early occupation of the Plains is difficult. No palynological core older than 3,600 years exists for the Alberta grasslands (Kroker 1979) and none older than ca. 7,500 years B.P. is known from the modern Parklands area (Vance 1983:33,38). Furthermore, the debate over radiocarbon dates on sediment samples (Clayton and Moran 1982:58; Jackson 1983; Moran and Clayton 1983, 1984) and the various geological opinions on ice margins and isochrones of deglaciation confuse the issue. Thus, it is not possible to determine to what extent, if any, ice margins and proglacial lakes influenced early human habitats in the province. The following discussion involves extrapolation from the foothills and adjacent regions and should be considered speculative.

A full glacial spruce forest is thought to have occurred south of the ice across much of the American Plains (e.g., Bryson and Wendland 1967:285; Hare 1976:513; Delcourt and Delcourt 1983:63). The northwestern extent of this spruce forest in Alberta is unclear; Mott and Jackson (1982) report rather different vegetation from Chalmers Bog, 15 km southwest of Turner Valley, Alberta. Of interest are pollen zones CB-3 and CB-2 which are bracketed by radiocarbon dates of 18,300±380 (GSC-2668), 18,400±1090 (GSC-2670) and of 8,220±80 (GSC-2851) years B.P. The lower zone, CB-3, contains sage, grasses, and sedge in abundance;

some poplar is also present (ibid.:509). They interpret the zone as tundra-like although small amounts of Chenopodiineae might suggest that a sparsely vegetated, cold grassland is a viable alternative reconstruction. The latter could be conceptualized as analogous to the mammoth steppe of Beringia (Hopkins et al. 1982; cf. Ritchie 1984). Thus, it seems reasonable to suggest that an open steppe or herbaceous tundra may have existed in the Alberta plains and foothills northwest of the early spruce forest (McDonald 1984:405, 407). Such a distribution might indicate drier conditions in southwest Alberta (see Bryson and Wendland 1967:286). In the foothills, pollen data from Yamnuska Bog indicate the presence of spruce and pine by about 10,400 years B.P. and that modern vegetation was established by at least 9,400 years B.P. (MacDonald 1982:33).

As the ice sheet began to waste away in early post-glacial times, spruce forest expanded northwestward, colonizing freshly deglaciated terrain and, perhaps, even the stagnating glaciers themselves (Ritchie 1976:1813; Schweger et al. 1981:58). This forest extended to the Missouri Coteau in Saskatchewan (Ritchie 1976) and perhaps to the Cypress Hills in Alberta (Wells 1970:189). It is not known if the forest extended completely across the plains to the foothills. In the Missouri Coteau area, Ritchie (1976:1798) noted macrofossils of spruce, poplar, buffalo berry and juniper, as well as pollen of spruce, sage and grasses. Bryson and Wendland (1967:286) note that this forest was more open on south-facing slopes and well drained sites; it was not directly analogous to modern boreal forest.

Wells (1970:199, 200) suggests that the early spruce forest on the Plains suffered catastrophic elimination by fire. Ritchie (1976:1798) indicates that the spruce forest on the Missouri Coteau was replaced by grassland by ca. 10,500 years B.P. This could be considered a minimum date for the establishment of grasslands in Alberta, although it is possible that there was no arboreal event between the herbaceous tundra-Holocene grassland transition along the southwestern Alberta Plains:

> During glacial times cold xeric-adapted tundra vegetation developed in the unglaciated foothills of southern Alberta. This periglacial vegetation persisted into the late glacial and

expanded northwards as ice recession continued. Rapid warming near 11,300 - 11,200 B.P. resulted in widespread ice stagnation, and the rapid invasion of arboreal vegetation until boreal forest was established over central Alberta. This warming trend appears to have continued unabated into the early Holocene (Schweger et al. 1981:58).

Wilson and Churcher (1978) and Wilson (1983:202ff) discuss the Late Pleistocene fauna from the Calgary and Cochrane area. Equus conversidens (Mexican horse) and Bison bison antiquus occur in both areas. Ovis canadensis (bighorn sheep), Rangifer tarandus (caribou), Cervus elaphus (elk, wapiti) occur upstream at Cochrane, and Mammuthus sp. (mammoth), and Camelops hesternus (yesterday's camel) occur at Calgary (Wilson 1983:204). Both localities are dated ca. 11,000 years B.P. (Wilson and Churcher 1978:729,733). Wilson (1983:205) interprets this fauna to indicate open steppe-tundra grasslands in the Calgary area grading to patchy forest and grasslands at Cochrane. The fauna thus appear to be consistent with the palynological interpretation discussed above.

FLUTED POINT SERIES

Fluted points in Alberta show a good deal of morphological variation. As well as classic Clovis and Folsom points, a short or stubby form is present. The latter was first noted by Wormington and Forbis (1965:86, 88, Figure 27:c). Fromhold (1972:1, 13) illustrated similar specimens which he designated "Fewkes Points." Reeves (1978a:6) describes these as "Basally-Thinned Triangular" points, while Haynes (1980:119) calls them triangular fluted points. Flutes may be present on one or both faces, and may consist of one large channel flake scar or multiple basal thinning flake scars. These points often appear to have been extensively reworked, but probably represent a distinct type. Their early age has been confirmed recently; a specimen from Charlie Lake cave in northeastern British Columbia was recovered from a context dated about 10,400 years B.P. (Fladmark et al. 1984). Some written descriptions of observed

Clovis

specimens do not permit differentiation of the Clovis and Basally-Thinned Triangular forms, so there may be the occasional error on the distribution map (Figure 6). As well, I assume that correct typological identification was made for other specimens in the Folsom and Plainview categories(Figure 7). Hopefully, Gryba's (1985) on-going research will clarify the description of existing specimens.

Folsom

Most fluted points have been found on the surface and thus lack context. West of Edmonton, Doll and Kidd (1976) report five "find-spots" which had yielded 12 fluted specimens collected by an amateur. The specimens include both Clovis and Basally-Thinned Triangular forms. When the discovery of a Basally-Thinned Triangular point at FiPo-266 near Genesee is considered (Ronaghan et al. 1983), it would appear that the North Saskatchewan drainage west of Edmonton holds unusual potential for such sites. Further south, the presence of a fluted point site (EhPu-1) inundated by Lake Minnewanka (Christensen 1971), and early radiocarbon dates from the Banff area (Fedje 1984), suggest a very early occupation of the mountain front in the Bow Valley. This is in marked contrast to the southern valleys; fluted points have not been recovered from Pass Creek valley in Waterton Lakes National Park (Reeves 1972:100) nor Crowsnest Pass valley (Driver 1978:97), despite intensive archaeological reconnaissance.

Basally-Thinned Triangular

The Sibbald Creek Site (EgPr-2)

In the foothills west of Calgary, Gryba (1983) recovered fluted points from the Sibbald Creek site (EgPr-2). The site is situated on a south-facing terrace above a grassy enclave within the forested foothills. The site suffers from compressed stratigraphy and poor bone preservation in its lower levels; its 50 cm of sediment contain perhaps 10,000 years of occupation debris. Identified in the lowest arbitrary level (40-45 cm below surface) are two fluted points, one Midland point, an Agate Basin, a Scottsbluff, and two Mount Albion points (ibid.:124).

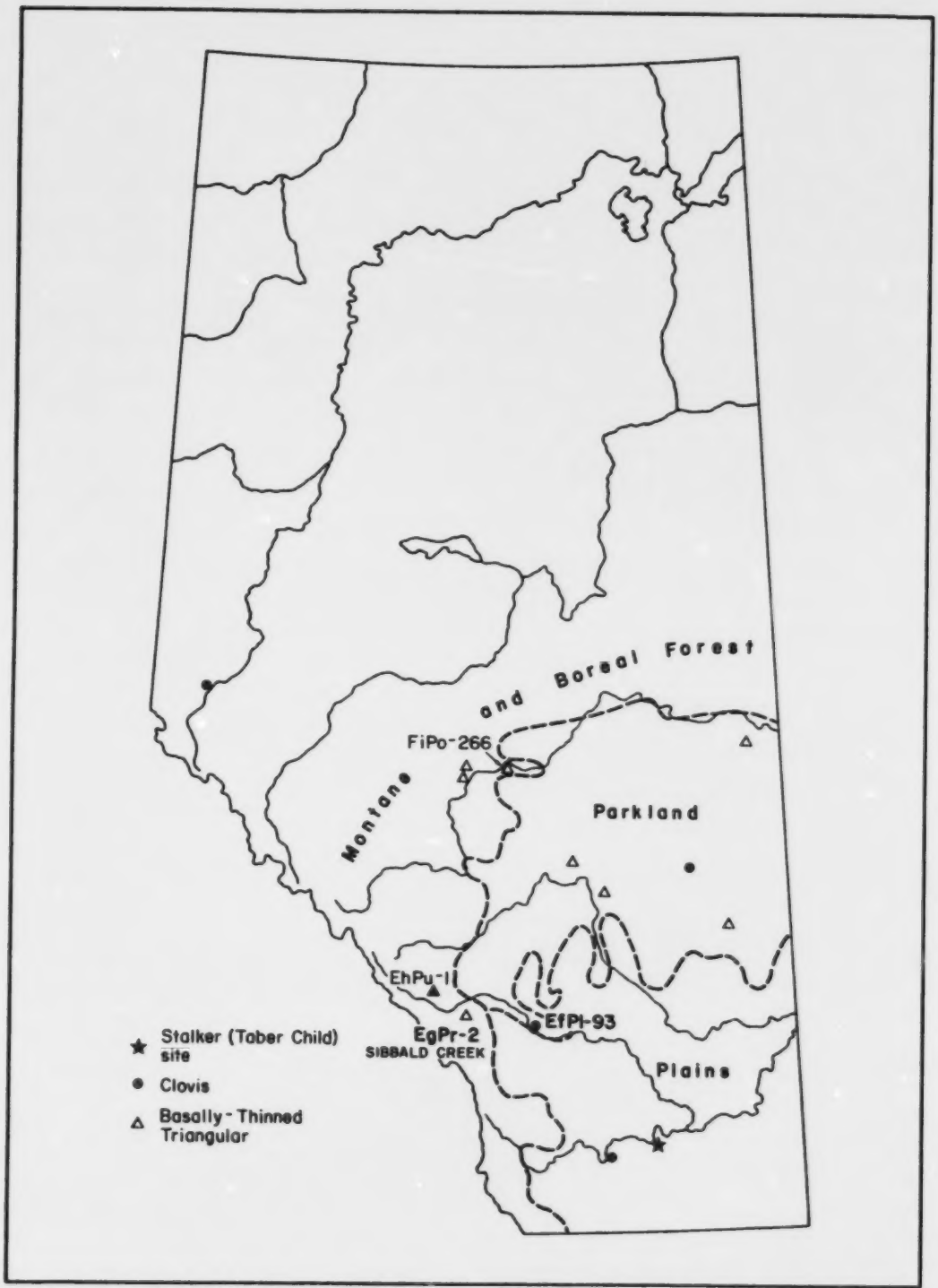



Figure 6. Distribution of Clovis and Basally-Thinned Triangular sites in Alberta; location of Stalker site (vegetation zones illustrated are modern).

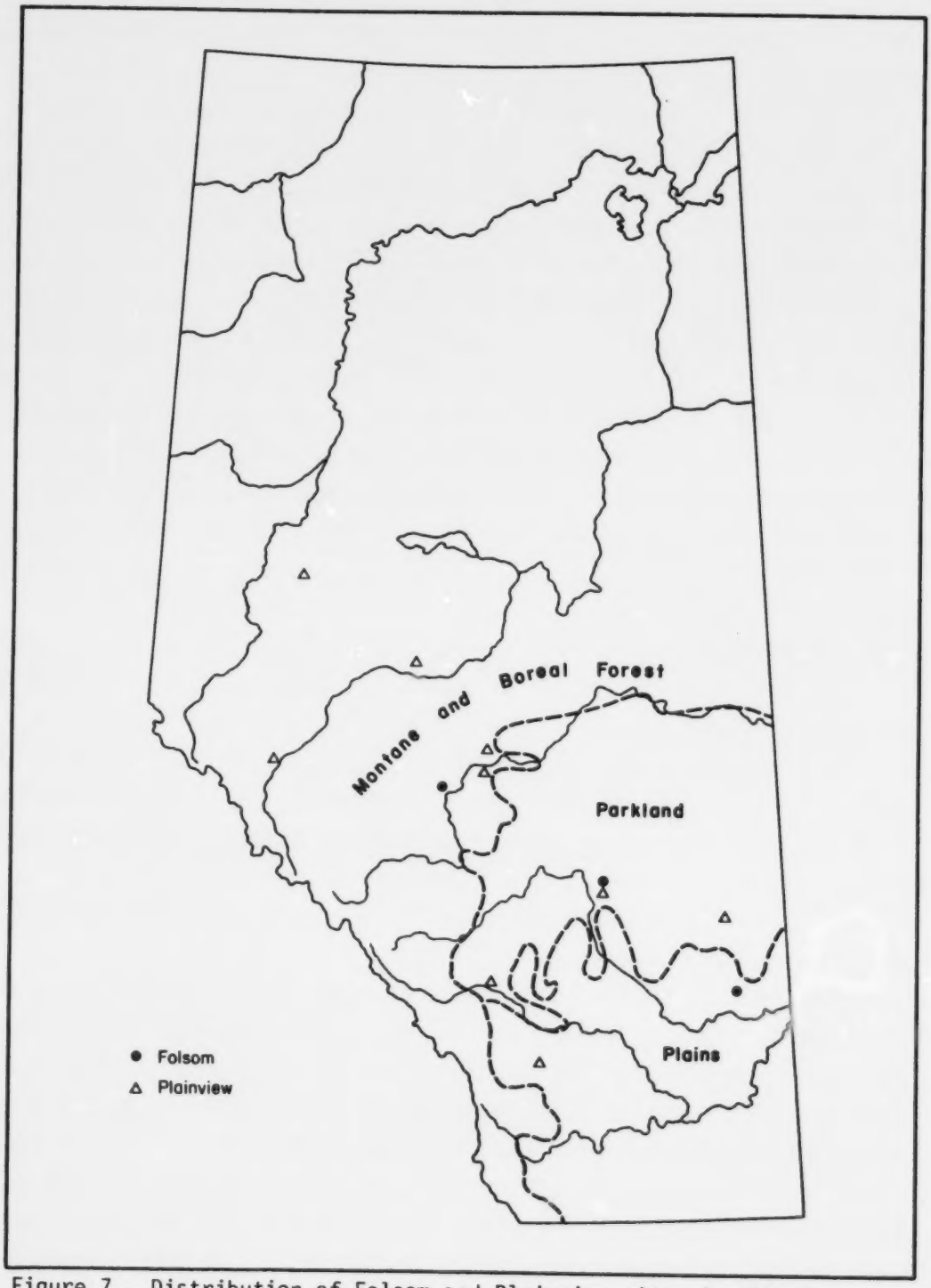



Figure 7. Distribution of Folsom and Plainview sites in Alberta (vegetation zones illustrated are modern).

On the basis of ethnographic analogy, and the better preserved faunal data from the upper levels, Gryba (ibid.:155ff) suggests site occupation in late fall by four to six families exploiting locally available bison. No date is available for the lowest level; an attempt to date carbon recovered by fine screening of the sediment failed due to equipment malfunction in the laboratory (Ball 1983:183).

Of the two fluted specimens recovered from EgPr-2, one is a short, Basally-Thinned Triangular form, while the other is fractured above the base and its form is unknown. Not all local archaeologists are convinced that the latter specimen is a fluted point (R. LeBlanc, personal communication 1984). The complete specimen and a channel flake fragment are made from a dull green crystalline siltstone, and the fragmentary specimen is made from black pebble chert (Gryba 1983:66). These materials, and indeed about 97% of the lithics recovered at this site, are locally available in the foothills and the Kananaskis Valley behind the front range of the Rockies.

Site EfPl-93

Site EfPl-93 is located on the east rim of the Bow River valley in south Calgary (McIntyre 1975; Wilson 1983). This is the only site besides the Sibbald Creek site where a fluted point has been recovered by archaeologists from a buried context in Alberta. Only the basal portion is present, but it has parallel sides, and on one face the short flute terminates below the fracture; it is probably a classic Clovis point. Wilson (ibid.:335) compares it to the Lake Minnewanka specimens noting similarity in the concave base and slight "ears."

The site is situated within bluff-top aeolian deposits which have preserved a well-developed buried soil about 55-65 cm below surface. The soil contained an elliptical, excavated ash-filled hearth but no charcoal, bone fragments nor fire broken rock. A few very small bone fragments were encountered elsewhere in the level. In the base of the modern soil, a Middle Prehistoric occupation occurs at 10-15 cm below surface. The Clovis point was found at 20 cm below surface, below the upper occupation but above the lower one. McIntyre (1975:15) suggests that the Clovis point was redeposited and notes that there was no

necessary association between the point and the lower occupation. So, like Sibbald Creek, EfPl-93 is more tantalizing than substantive.

Comments: Fluted Point Series

The relative frequencies of the various early point types are difficult to interpret, as few are known (Figure 3). While Clovis and Basally-Thinned Triangular points are rare, Folsom discoveries seem particularly rare (Reeves 1978a). Kehoe (1966a) noted only five classic Clovis and four classic Folsom specimens in his survey of Saskatchewan fluted points.

The distribution of early point types is also not particularly informative (Figures 6, 7). As Gryba (1985) notes, the distribution generally coincides with that of cultivated land in Alberta. He does suggest, however, that Basally-Thinned Triangular points are located primarily in central Alberta and represent the winter range of the Paleo-Indians. Gryba assumes that the short Basally-Thinned Triangular points are reworked Clovis points, reworked because of the difficulty of acquiring raw material in winter. However, this assumption may not be warranted, nor may the apparent distribution within the modern parkland limits be germane to the issue.

Haynes (1982:384) notes that the dates from Clovis sites of the Plains and Southwest are clustered in the period 11,500-11,000 years B.P. and are there succeeded by Folsom materials dated about 11,000-10,500 years B.P. Stork (1982:7) suggests a temporal cline for Clovis away from the midcontinent such that Ontario may have been first penetrated between 11,000 and 10,400 years B.P. Dragoo (1976:9) suggests that the Northeast manifestations are late expressions of the complex. Rather than the Clovis/mammoth association of the west, the complex is thought to associate with caribou (ibid.:9) in this later manifestation.

The temporal cline noted for the northeast may be relevant to our understanding of the occupation of Alberta by makers of fluted points. The dearth of Folsom material in Alberta is considered by Reeves (1978a:7) to be due to deteriorating climatic conditions related to the onset of Pinedale III glaciation (see Richmond 1960). Alternatively, Folsom may have been of too short a duration to have penetrated Alberta from its southern heartland. Perhaps Basally-Thinned Triangular points

in Alberta represent an "evolved" Clovis population which precluded Folsom entry. Dates of 10,460±400 (SFU 300) and 10,300±160 years B.P. (SFU 378) on bison bone associated with a Basally-Thinned Triangular point at Charlie Lake Cave (HbRf-39) in the Peace River area of northeastern British Columbia support the relatively late age of these points. As noted:

> While extensive re-sharpening is a prevalent characteristic of all Paleoindian assemblages, the other traits seem to set off many northern fluted points, including most specimens from Alaska, as a group distinct from the classic and largely outworn Clovis-Folsom dichotomy of more southern North America. Certainly the Charlie Lake point shows little if any obvious relationship to the contemporary classic Folsom type of the central Plains and mountains of United States ... Thus if correlations must be drawn, the Charlie Lake specimen seems to coincide with a wide-spread distribution of a distinctive late northern type of fluted point (Fladmark et al. 1984:134).

Perhaps the "classic" Clovis points could represent an initial southward migration (diffusion?) of Clovis (Haynes 1982; Clark and Clark 1983), whereas the Basally-Thinned Triangular points might indicate a later northeastward expansion onto newly deglaciated terrain (cf. Haynes 1980:119). Indeed, Reeves (1978a:6) suggests that the northeastern distribution of Clovis was controlled by the proglacial lakes resulting from the wasting Laurentide ice, although his 11,000 years B.P. ice margin location (Figure 4B) lies far north of the Alberta Plains.

PLANO SERIES

Like the Fluted Point Series, most other Early Prehistoric lanceolate projectile points in Alberta are from surface contexts. Plano points are cross-dated according to sequences developed in the United States, particularly the Hell Gap site series (Irwin-Williams et al. 1973), modified by more recent discoveries (see Frison 1978:22ff, 1983). The sequence of Agate Basin/Hell Gap - Alberta/Cody - Frederick/Lusk is projected directly from American data (Reeves 1969). While other point types have been identified in Alberta (e.g., Bryan 1980; Driver 1982), they seem to be

Agate Basin

considered peripheral to the main sequence noted above and have never been integrated into general cultural historical models.

The sequence from the Hell Gap site (Irwin-Williams et al. 1973:52) may be summarized as follows:

| | |
|---|---|
| Lusk | 7950-7450 B.P. |
| Frederick | 8350-7950 B.P. |
| Cody | 8750-8350 B.P. |
| Alberta | 9450-8950 B.P. |
| Hell Gap | 9950-9450 B.P. |
| Agate Basin | 10450-9950 B.P. |
| Midland | 10650-10350 B.P. |
| Folsom | +10750-10550 B.P. |

Hell Gap

This sequence, showing very little temporal overlap between point types, undoubtedly influenced Reeves' (1969) first cultural historical model for the Alberta Plains. His sequence (see Figure 2) differed in that a number of point types thought to co-occur, or be related temporally, were combined. However, the concept of temporal succession of point types has been maintained even in Reeves' (1978a, 1983b) most recent considerations. Given the minimal amount of data for the Early Prehistoric Period in Alberta, there has been no compelling reason to either accept or revise the scheme.

Alberta

Pettipas (1982, 1985; Pettipas and Buchner 1983) has been particularly interested in Early Prehistoric systematics and has extensively revised the stacked chronological scheme. While Irwin (1971; see also Irwin and Wormington 1970) considered the Plainview, Folsom and Plano material to represent "... one culture with variation over time and changes in tool kits, but with a basic typological unity" (1971:48), Pettipas (1982:55) proposed three more or less contemporary traditions:

| Tradition | Projectile Points |
|---|---|
| Bayard | Scottsbluff-Eden-Alberta |
| Amarillo | Plainview-Meserve-Frederick |
| Niobrara | Agate Basin-Hell Gap-Lusk |

more recently, Pettipas (1985, Pettipas and Buchner 1983) has used a phase/subphase scheme:

| Phase | Subphase |
|---|---|
| Horner | Alberta-Cody |
| Sister's Hill | Agate Basin-Hell Gap |

In either case, he considers the point types/complexes within a particular tradition or phase to be related, and the traditions or phases to be generally contemporary.

Scottsbluff

Dyck (1983) envisions a number of point types linked in a system that "... deals only with projectile points and assumes [that] other parts of the tool kit are fundamentally similar from one complex to another" (ibid.:79, brackets mine). Dyck's scheme may be summarized as follows:

| Tradition | Projectile Points |
|---|---|
| Fluted or Basally Thinned | Folsom/Midland-Plainview |
| Straight or Rounded Base | Agate Basin-Hell Gap |
| Stemmed | Firstview-Alberta-Cody-Milnesand |

Eden

Again, Dyck's chronology indicates some contemporaneity among traditions (Figure 2).

Further afield, Frison (1983) suggests a number of relationships which more or less parallel the tradition models of Pettipas and Dyck. He (ibid.:111) suggests a Clovis-Folsom relationship through either Goshen or a number of technologically intermediate forms found in surface collections from the Bighorn Mountains. The relationship to post-Folsom complexes is less certain:

> The writer feels much more comfortable claiming a possible direct relationship between Plainview and Folsom than Agate Basin and Folsom based on technology alone. On the other hand, the Agate Basin site has dated, stratigraphic evidence of Agate Basin immediately above Folsom with no apparent change in site activities and no significant changes in tool assemblages. The fluted Folsom points may have simply been replaced by the Agate Basin (Frison 1983:114).

Frison further considers Agate Basin and Hell Gap to be obviously related.

The relationship of the Agate Basin/Hell Gap Complex to Alberta/Cody is unclear, although Frison (ibid.:117) considers Cody (Scottsbluff and Eden) to be derived directly from the Alberta Complex. The Kersey Complex (Firstview and Milnesand) on the Central and Southern Plains is the temporal equivalent of Alberta/Cody, but Frison does not speculate on relationships.

Frederick (Terminal Paleo-Indian)

The terminal Paleo-Indian complexes on the Plains, including James Allen, Angostura, Frederick (or Fredrick), Meserve, and Lusk, are poorly understood. Elsewhere, Frison (1978:34) suggests that Lusk is a "degenerate" Frederick point. All these late manifestations may represent increasing regionalism. The variety of point types and the increased reliance on local lithics in post-Cody assemblages appear to support this concept (Frison 1983:120).

As noted earlier, most Early Prehistoric Period sites known on the Alberta Plains are surface sites. Lacking context, such discoveries provide little information to evaluate culture history models. Examination of the frequencies of particular diagnostics (Figure 3) suggests that the Alberta/Cody Complex represents the most intensive Early Prehistoric occupation of the province, a conclusion reached by Wormington and Forbis (1965:185; see also Adams 1976:105). Agate Basin has been recorded from much of the province (Figure 8). Hell Gap appears to be particularly rare in the province. The Alberta/Cody discoveries appear to be more or less coincident with the Plains and Parklands or

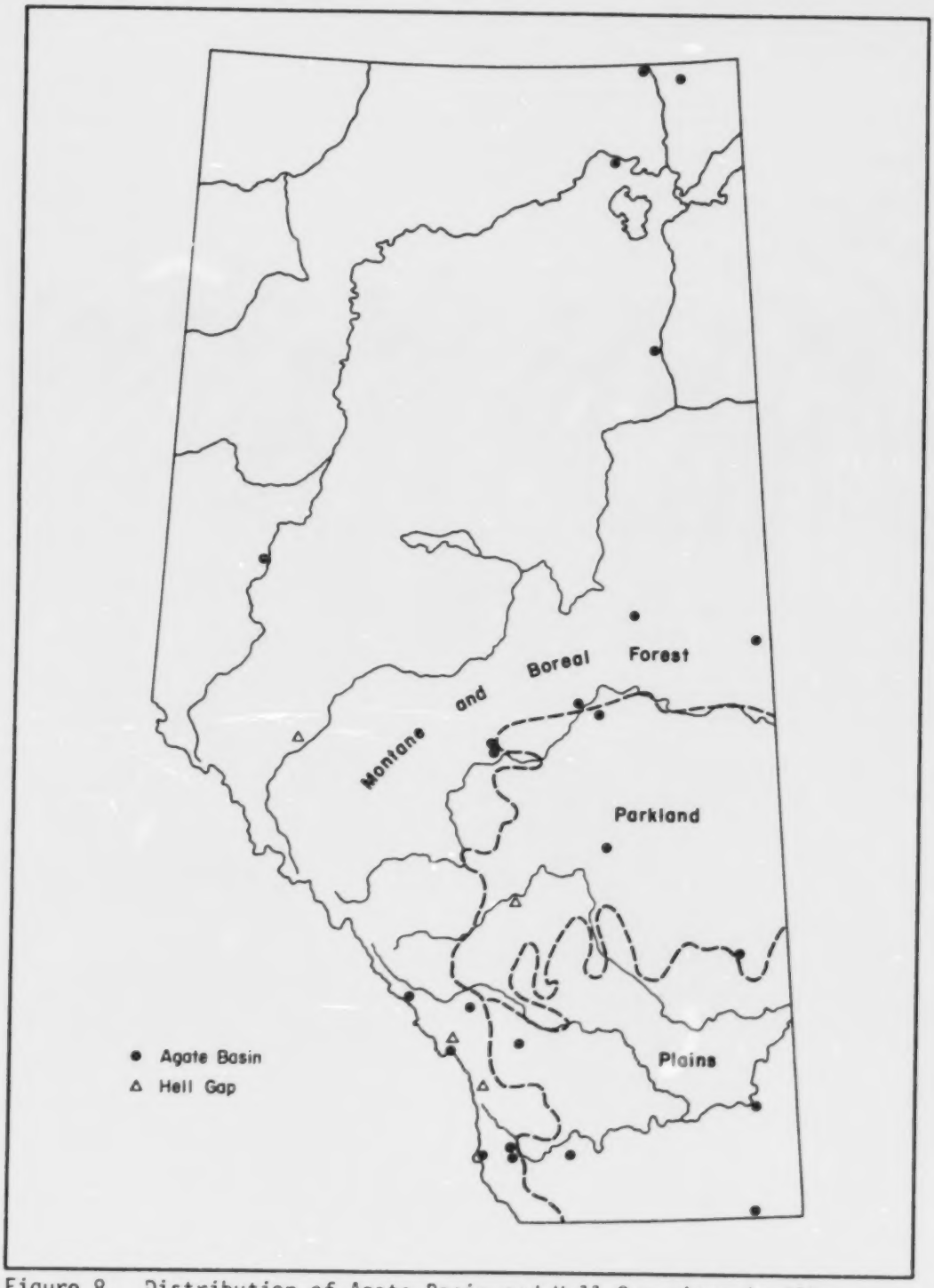



Figure 8. Distribution of Agate Basin and Hell Gap sites in Alberta (vegetation zones illustrated are modern).

only slightly north of these areas (Figure 9). The paucity of Frederick/Lusk may, in part, reflect misidentification of the points in surface contexts. I should also note that Taltheilei materials (Bryan and Conaty 1975:81ff) and northern lanceolates of late date (see Workman 1978) may be mistaken for Paleo-Indian material.

Besides the surface finds, a few buried Early Prehistoric sites are known. In the Plains of Alberta, the Fletcher site represents an Alberta/Cody kill. As well, a number of terminal Paleo-Indian sites which document lanceolate points associated with early side-notched styles are described below.

The Fletcher Site (DjOw-1)

The Fletcher site is located near Chin Coulee in southern Alberta (Figure 9; see Forbis 1968b; Quigg 1976; Wormington and Forbis 1965). The site was exposed by the excavation of a dug-out; the only topographic relief in an otherwise undistinguished setting is a sinuous esker at the north edge of the site (Forbis 1968b:9). Relief may have been more pronounced during the Alberta/Cody occupation since that component is now buried under 1.65 m of aeolian deposits. At that time, the high groundwater flow now observable in the dug-out might have risen as a free flowing spring.

The bone bed rests on glacio-lacustrine sands and is capped by thick aeolian sediments; later cultural material was scattered on the site surface (ibid.:2). Much of the Alberta/Cody level bone is stained dark brown or blue as a result of minerals in the groundwater. Although Forbis noted that the bone crumbled upon exposure, I recently recovered well consolidated elements from the bone bed outcropping in the dug-out; they are currently being analysed by Richard Morlan at the National Museum of Man in Ottawa. Most of the bone is bison although Quigg (1976:109) recovered a single deer phalange. Unfortunately, the bone is unsuitable for radiocarbon dating due to hydrological contamination (Forbis 1968b:2); perhaps the new accelerator technique would overcome this problem.

The cultural material consists primarily of projectile points, although two spokeshaves with graver tips, two side scrapers, a split-pebble end scraper, several flakes, hammerstones, and bifaces were

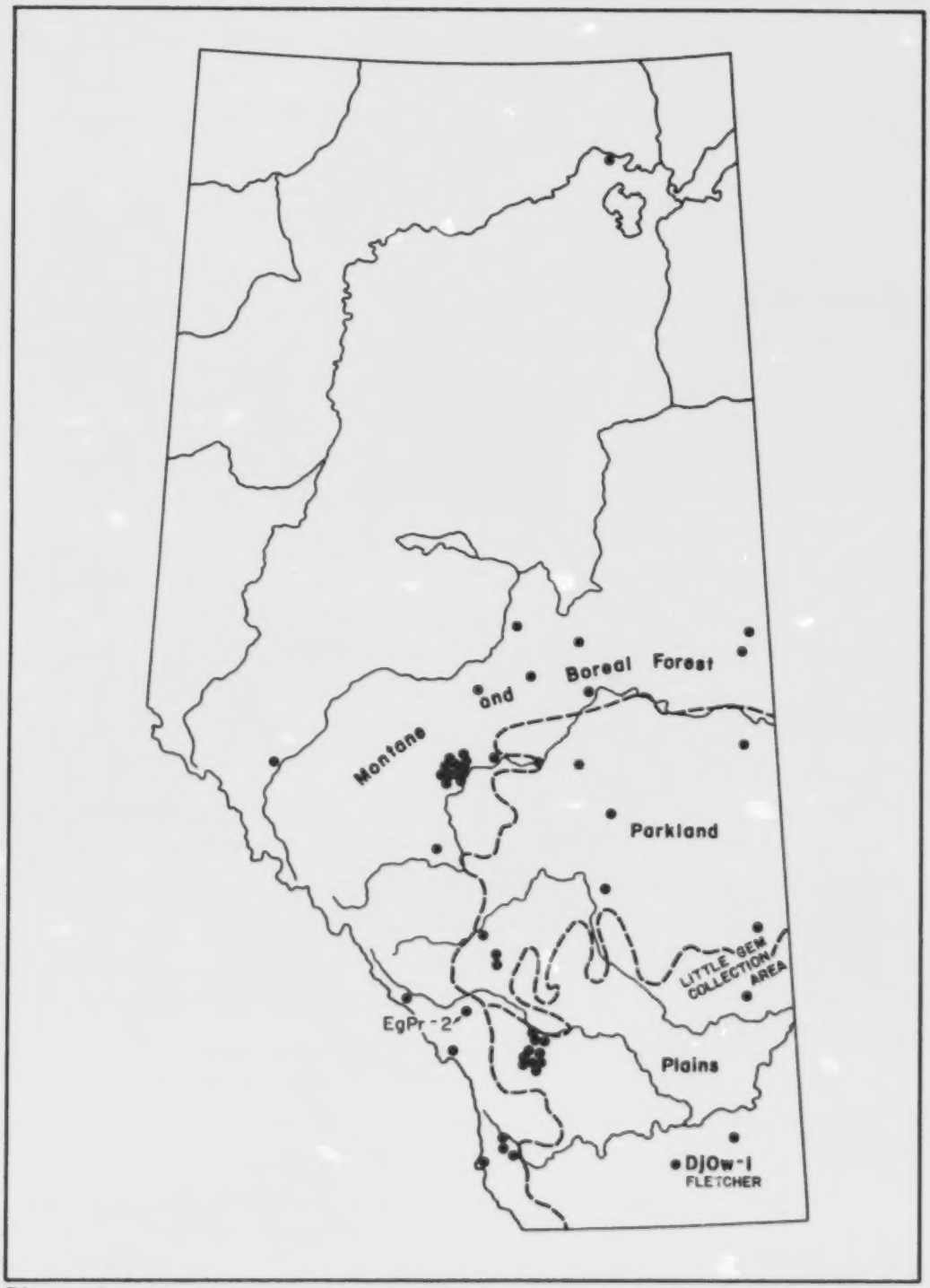



Figure 9. Distribution of Alberta/Cody sites in Alberta (vegetation zones illustrated are modern).

also recovered. Forbis (ibid.:7) also reports a grooved maul fragment associated with the Alberta/Cody material.

The projectile points include both Alberta and Scottsbluff. It seems likely that these were associated in the bone bed, but the Scottsbluff points were found in the dug-out spoil. Quigg (1976) notes that there are actually two very closely spaced horizons within the bone bed, so a case might be made for separation of the styles. Forbis (1968b:3, 5) records some variant point styles including a corner notched specimen recovered about 7 cm above the bone bed. While Forbis (ibid.:5) initially suggested that the specimen might have been associated with the Alberta/Cody stratum, he subsequently suggested on typological grounds, that it may be intrusive:

> Possibly a corner-notched point of moderate size is also intrusive in its position only slightly above the bone bed. Like several specimens from the surface, it does not fit comfortably among the Scottsbluff and Alberta points either in respect to size or shape (Wormington and Forbis 1965:120).

The Fletcher site was probably occupied in warm weather since the locale is an exposed prairie. As Forbis notes "... winter occupation of such areas on the Plains must have been perilous" (1968b:3). Possibly, the site represents a kill of animals attracted to a spring in summer. Since there is no evidence that the animals were driven into a mire, and neither a jump nor a pound is likely at this spot, a surround would seem to have been the most likely hunting technique.

Recently, Doll (1982:84) has attempted to reinterpret the Fletcher site as an example of the "Pre-Archaic" (to be discussed later). The apparent association of a single corner notched point with the Alberta/Cody material forms the basis of Doll's interpretation. Doll supports his argument as follows:

> That the Fletcher Site may represent a Pre-Archaic manifestation on the Northwestern Plains is supported by the following: Quigg's (1976) radiocarbon dates from the site showing it to be more recent than originally thought; ecological data showing an earlier beginning for the Altithermal (Schweger et al. 1981); stratigraphic data from the Sibbald Flats Site (Gryba, personal communication) which showed Scottsbluff points at the end of the lanceolate sequence; and lastly, the data from the Boss Hill Site (Doll 1982:84).

There are some difficulties with this argument. As noted previously, the association of the notched point with the Scottsbluff material is questionable. The data from Boss Hill do indicate an association of notched points with Paleo-Indian lanceolate points, but the latter are not Scottsbluff types. Gryba (1983:124) now reports data which indicate that severe component mixing occurred at the Sibbald Creek site; thus the stratigraphic data from that site are inadequate to test Doll's hypothesis. The Fletcher site radiocarbon dates are useless due to contamination of the bone. The dates range from 1675±145 (S-1081) to 7655±110 years B.P. (S-1084; Quigg 1976). Data unavailable to Doll indicate that a split sample was submitted by the Archaeological Survey of Alberta and yielded dates of 4,130±115 (S-1083) and 5,960±170 years B.P. (RL-560); even at three standard deviations, these results are incompatible by 1,000 years. In summary, there does not appear to be enough evidence to support Doll's interpretation strongly enough to reassign the Fletcher site to the "Pre-Archaic." While we do not know much about the Fletcher site, what we do know is consistent with the Paleo-Indian bison hunting interpretation of Forbis (1968b).

The Little Gem Complex

During the dustbowl of the 1930s, an amateur archaeologist, Russell Johnston, carefully surface collected a number of sites in east-central Alberta (see Wormington and Forbis 1965:56ff). By noting artifact associations revealed by continuing erosion between periodic collecting episodes, Johnston defined the Little Gem Complex. The complex constituted the first recognition of the association of Cody knives, Alberta, Scottsbluff and Eden points.

Pettipas (1980) has compared the Cody Complex to the Little Gem material. In essence, Pettipas attempts to demonstrate that the Little Gem Complex is a recognizable regional subphase differing from the Cody Complex:

> That the Little Gem Complex is comparatively early in the Scottsbluff continuum is borne out by the presence of typologically early forms -- Sandia-like, Mohave-like, and Plainview-like -- which either form "home-grown" elements of the Complex (in the case of the first two) or were adhesions to the Little Gem assemblages by virtue of group contact. The Little

> Gem Complex thus gives us cause to acknowledge that (1) trait persistence and (2) the existence of co-traditions were realities in Paleo-Indian prehistory (Pettipas 1980:12).

While I would not dispute Pettipas' general concept, it should be noted that the possibility of spurious associations inherent in surface collected data cannot be readily dismissed. The Little Gem Complex should be viewed only as a hypothesis awaiting confirmation.

## THE EARLY PREHISTORIC-MIDDLE PREHISTORIC TRANSITION

Although the earlier complexes of the Early Prehistoric are poorly known, there is a somewhat better data base for the end of the period. Two sites are particularly important: The Boss Hill site (FdPe-4) near Buffalo Lake in central Alberta (Doll 1982), and the Hawkwood site (EgPm-179) in Calgary (Van Dyke and Stewart 1984). Both sites document the association of lanceolate and early notched points.

Parkhill Lanceolate

### The Boss Hill Site (FdPe-4)

The Boss Hill site (Locality 2) is located in central Alberta at the base of a hill in knob-and-kettle topography (Figure 10). Occupation 8, the earliest level, constitutes a 20-30 cm thick level which is interpreted as a pond deposit (Doll 1982:30). Dates of 7875±130 (S-1251) and 7750±105 years B.P. (S-1371) from two hearths within the level are consistent with the stratigraphic position of Mazama Ash above and a date of 8090±310 years B.P. (S-1483) from plant material below the occupation horizon. Occupation 8 is interpreted as a late summer-fall habitation of a seasonally dry pond basin. Faunal material representing four bison, one each of elk, fox, badger, beaver, muskrat, three hare, at least two ducks, two geese and one fish may reflect faunal resources taken near the site. In addition to projectile points, artifacts recovered included nine bifaces, seven end scrapers, one spokeshave/graver, 13 unifacially retouched flakes,

Boss Hill Corner-Notched

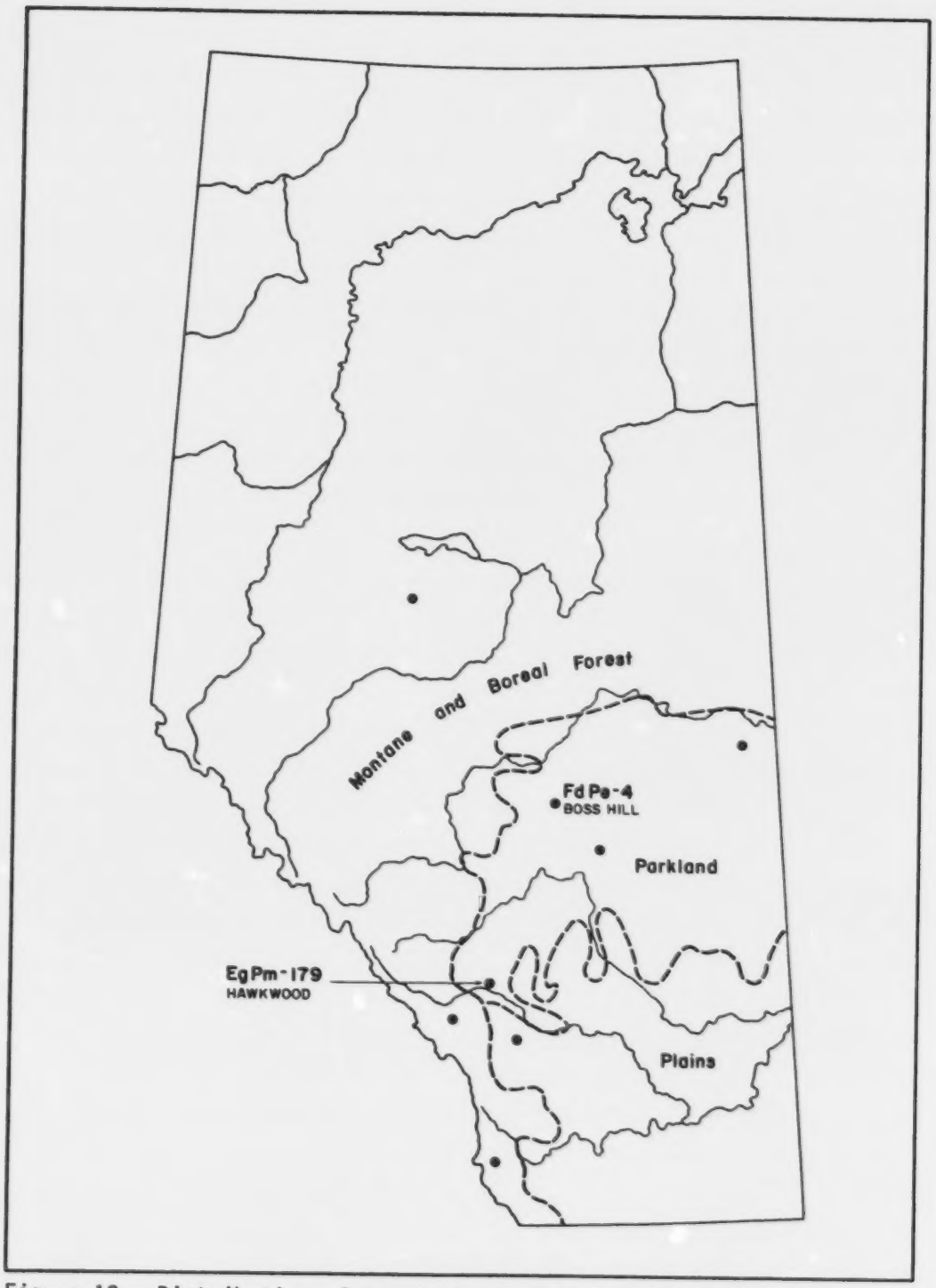



Figure 10. Distribution of terminal Paleo-Indian (Early Prehistoric-Middle Prehistoric transition) sites in Alberta (vegetation zones illustrated are modern).

three bipolar cores or pièces esquillées, flakes, cobble cores and spalls, hammerstones, anvils and two sandstone items identified as milling-stones. The vast majority of artifacts were made of local lithics.

The projectile point inventory consists of two lanceolate points designated "Parkhill Lanceolate" after similar Saskatchewan finds (Ebell 1980) and three widely corner notched specimens designated Boss Hill Corner-Notched. The former are identified by Ebell (1980) at the Parkhill site as Agate Basin; the latter are morphologically similar to Mount Albion Corner-Notched (Doll 1982:40; see Benedict and Olson 1978:123).

The Hawkwood Site (EgPm-179)

The Hawkwood site (EgPm-179), located in a morainal depression on Nose Hill in Calgary, yielded six components (Figure 10; Van Dyke and Stewart 1984). Three paleosols were discovered below Mazama Ash between 120 - 130 cm below surface within clay-rich pond deposits. Occupation 1, radiocarbon dated to 8,250±330 years B.P. (RL-1554), contained a lanceolate point, a point identified as Salmon River Side Notched, and a stemmed or large corner notched specimen, all in association. A number of bifaces, split pebble end scrapers, spall tools and retouched flakes, as well as debitage, were recovered. A small, discoidal pebble exhibiting a pitted surface is interpreted as a possible grinder. With the possible exception of two projectile points, all lithics are locally available. All faunal material is of bison. Two unprepared hearths were identified.

Hawkwood is interpreted as a small campsite occupied by one or two families. The location is highly exposed, suggesting a mild weather occupation, perhaps in fall while the basin was dry. Seasonality could not be determined from the faunal remains.

Comments: Early Prehistoric - Middle Prehistoric Transition

The association of early notched points with lanceolates has been noted at a number of sites in the mountain region of Alberta (e.g., Lifeways of Canada Limited 1974:15), but this association has generally been regarded as spurious. However, the data from Hawkwood and Boss Hill

would seem to indicate that such associations do indeed occur. This should not be surprising; presumably, the diffusion of notched points into a terminal Paleo-Indian, lanceolate point-using population should result in sites where both point forms are deposited. Of course, sites with such point associations present a difficulty in classification since they contain artifacts diagnostic of both the Early and Middle Prehistoric Periods.

Doll (1982), following Sollberger and Hester (1972), has approached this problem by proposing a new period: the Pre-Archaic.

> ... the Pre-Archaic may be defined as the period of transition between the Palaeo-Indian period and the beginning of the Early Plains Archaic period. It occurs after the onset of the Altithermal and is characterized by the coeval occurrence of lanceolate projectile points of late Palaeo-Indian affinity and notched points of Archaic affinity. The subsistence strategy of the Pre-Archaic peoples is adapted to ecological diversity; a major characteristic of the Aspen Parkland. Thus, the Pre-Archaic is a chronological period, but one marked with cultural and ecological implications (Doll 1982:84).

The terminology proposed is unlikely to gain acceptance by most Northwestern Plains archaeologists. As Meyer notes: "Many archaeologists eschew any use of the term 'Archaic' in reference to prehistoric plains bison hunters and it is unlikely, therefore, that they will find 'Pre-Archaic' any more palatable" (1983a:249). I have discussed earlier the use of the term Archaic, and will not pursue this terminological issue further (see also Reeves 1985).

Doll's "... cultural and ecological implications" (1982:84) are obviously related to the onset of mid-Holocene aridity. Presumably, he is suggesting that the adaptation represents increasing sedentism and scheduling of the seasonal round to a variety of more or less equally important subsistence resources (ibid.:83). However, both the Boss Hill and Hawkwood sites are dominated by bison, both in terms of minimum number of individuals and, especially, meat weight. The evidence would suggest, therefore, that the variety of faunal resources exploited at Boss Hill is supplemental to bison. Thus, there seems to be no good evidence that the "Pre-Archaic" adaptation was structured towards multiple resource exploitation at the expense of bison procurement.

In summary, there is evidence that late lanceolate points and early side notched points co-occur in assemblages at the end of the Early Prehistoric Period. But it is premature to propose a new period for these transitional sites. There are currently too few sites to define such a period or establish an adequate chronology for the transition. As well, there is, as yet, too little evidence to demonstrate either increased sedentism or a change in subsistence orientation.

## DISCUSSION: EARLY PREHISTORIC PERIOD

Paleo-Indian studies have advanced in the last decade, although this advancement has primarily resulted from work done in the western United States (see Frison 1983) and in eastern Canada (see Stork 1982). The Canadian Plains have seen little change in the available data base and have contributed little to our understanding of the period. Despite greatly increased work as a result of the growth of historical resources legislation, buried sites of this period remain elusive. The mountain sites generally suffer from poor bone preservation, collapsed stratigraphy, and small site size with limited data. An exception is the Vermilion Lakes site (EhPv-8) near Banff (Fedje 1984). Unfortunately, I do not have the latest data from that site; it will be reported shortly in a companion volume on Eastern Slopes prehistory (Ronaghan 1986).

### Archaeological Visibility

Since numerous surface finds indicate a resident population in Alberta since at least Clovis times, our inability to discover significant early sites must be a result of inadequate exploration strategies by Canadian Plains archaeologists. Presumably, since our American colleagues in states adjacent to the mountains are able to discover such sites, our problems are related in part to the glacially-derived deposits which cover the Canadian Plains.

Wilson (1983, 1986) has systematically investigated this problem of "archaeological visibility" in the Calgary area and his astute observations are no doubt of significance to all Canadian Plains archaeologists. He notes that alluvial/colluvial fans built outward from coulees in the Calgary area contain Mazama Ash (ca. 6,600 years B.P.) some 50 cm below surface; the ash dips at the same angle as the modern

fan surface, indicating that most of the deposition forming the fans occurred in early Holocene times. Wilson attributes the rapid deposition to permafrost melting in post-glacial times with slope stability approached about the time of Mazama ashfall. Similar processes were noted in slope aprons where easily eroded silts occur upslope. The implication is that early surfaces, including both buried terrace surfaces and any occupational floors in the fans themselves, are preserved but relatively deeply buried. Fans formed on high terraces should thus be of considerable potential for containing Early Prehistoric occupations which can only be discovered by deep testing procedures. This is precisely the situation of the Vermillion Lakes site, a site which seems to have the greatest potential for a dense Early Prehistoric data base yet found in the province (Fedje 1984).

Wilson (1983) also notes that downwind valley rims perpendicular to the prevailing wind direction often contain "cliff-top" aeolian deposits. Such locations appear to have been preferred camping locations in Late Prehistoric times, and, due to aeolian deposition, may contain earlier occupations. McIntyre (1975) discovered a Clovis point at EfPl-93 in such a location, although it was assessed as probably being out of context. While perhaps not the best situation for large Early Prehistoric sites, such deposits should be carefully investigated.

The discovery of later Early Prehistoric occupations below Mazama Ash at the Hawkwood and Boss Hill sites, indicates that infilled swales hold some potential for the preservation of early components. Such depositional basins are apparently not confined to pronounced knob-and-kettle topography; Quigg (personal communication 1983) noted a similar infilled depression exposed by pipeline ditching near the eastern border of the province. The ditch profile displayed a dipping A horizon, a Mazama ash stratum, and buried soils below. Unfortunately, that particular basin lacked cultural material.

There is widespread evidence for a period of pre-Mazama soil formation in the province:

> Between the time of glacial retreat and the time of deposition of Mazama ash at 6,600 years B.P. ... , a period of non-deposition existed in the western part of Alberta. This is indicated by the widespread development of soils ... The fact that alluvial deposition resumed immediately prior to Mazama ash

> deposition makes a strong case for these soils being penecontemporaneous (Waters 1979:70).

Waters (1979:70ff) lists the available radiocarbon dates which fall generally in the period 9,500-8,000 years B.P. Wyckoff (1982:22, and references therein) has discussed what is probably the same soil formation period in North Dakota. There, a widespread soil is designated the Aggie Brown member of the Oahe formation and is dated generally 12,500-8,500 B.P. years (ibid.:24). While exposures of these soils are discontinuous, the studies are sufficient to prove that preserved stratified deposits remain intact on the Plains and at least some contain early occupations. Unfortunately, these are usually below shovel-probe depth and may not have any surface expression. Research projects designed to explore deep deposits, or the monitoring of deep artificial exposures such as pipeline ditches are probably the only ways to locate such early deposits.

## Reconstructing Culture History

With such a dearth of Early Prehistoric sites, culture history reconstruction of this period can be no more than speculative. Reeves (1978a), on the basis of personal observation of surface finds, and influenced no doubt by Husted's (1969) sweeping vision of mass migration, has constructed the only comprehensive model for Alberta. It is, as he notes, no more than a "straw model." In fact, it is acknowledged as being so highly speculative that there seems little point in extensive criticism of it, and I shall confine my remarks to the occasional comment.

In Reeves' (1978a) view, Clovis hunters were generalists, without strong mammoth/bison association, who occupied the plains and mountain valleys as these became free of ice and proglacial lakes. In the mountains, Clovis was subsequently replaced by Cordilleran cultures from the west, perhaps by 10,500 years B.P. On the Plains, Clovis (or Basally-Thinned Triangular or Folsom/Plainview?) was replaced by Agate Basin at the same time. Subsequently, Alberta-Cody Complex peoples, conceived to be highly specialized, efficient bison hunters, displaced Plains Agate Basin hunters into the mountains and northern forest; this event occurred ca. 9,500-8,500 years B.P. The specialized Cody hunters on the Plains are suggested to have had difficulties coping with

environmental stress associated with the onset of the Cochrane Ice advance, and Agate Basin-derived lanceolate point users reoccupied the Plains.

The complexity of this scenerio is a result of the assumption that the late lanceolates (Lusk, Parkhill, Pryor stemmed, etc.) and the earlier Agate Basin-Hell Gap points constitute a single cultural tradition, with Alberta-Cody representing a different tradition. While the Agate Basin-Hell Gap, and Alberta-Cody internal relationships seem clearly acceptable (see Frison 1983) the relationship between these type complexes is unclear. Opinions vary from stacked sequences (e.g., Irwin 1971) to various arrangements of contemporary traditions (e.g., Bryan 1980; Dyck 1983; Pettipas 1982). When the confused situation regarding the terminal Paleo-Indian complexes of the Plains and adjacent mountains is added (e.g., Frison 1983:120), it seems impossible to construct an adequate culture historical model for the period. In Alberta, at least, the lack of an Early Prehistoric data base of any consequence does not permit critical evaluation of Reeves' (1978a) model.

In Manitoba, Pettipas and Buchner (1983) note little Clovis or Folsom material. They ascribe this situation to a fauna-poor boreal forest, the possibility of ice-crusts causing periodic forage destruction, and/or unstable ground surfaces and burial of cultural materials creating a problem of archaeological visibility (ibid.:43ff). Following this episode is the Sister's Hill Phase, characterized by Agate Basin, Hell Gap, and Angostura points. The people represented by this phase apparently occupied the newly formed grasslands west of the Manitoba Escarpment. Sometime around 9,500-8,000 years B.P., Horner Phase peoples, using Scottsbluff, Eden, Alberta, and Firstview points, penetrated the area from the south and west and displaced the Sister's Hill Phase peoples east of the escarpment.

The Manitoba model suffers from the same problem as the Alberta one, that is, a paucity of buried sites which would allow it to be tested. Without such sites, surface finds can be continually reorganized into untestable models of prehistory. This is well illustrated by comparing the Pettipas and Buchner (1983) reconstruction with that of Pettipas (1985). Whether there is any point in formulating such models in light of an inadequate data base, I leave to the reader.

The Technological Basis

The last comment I shall make regarding the Early Prehistoric concerns the technological basis for the period definition, that is, the description of the use of points on thrusting spears as contrasted to the dart/atlatl system marking the Middle Prehistoric (Reeves 1983a). This model is based primarily on projectile point size differences between the early large lanceolate points and the smaller notched points of the Middle Prehistoric. This interpretation is not particularly unusual; indeed, even Frison's (1974:85, 1978:333) replicative experiments assume use of a heavy thrusting spear. The rather abrupt and widespread appearance of side notched points in terminal Paleo-Indian assemblages (e.g., Buchner 1980:121ff; Gryba 1980:37) might then be explained as the rapid diffusion of a superior weapon system, the atlatl and dart (cf. Husted 1969:88).

Bryan (1980:81), on the other hand, has suggested that the appearance of lithic points at the onset of the Early Prehistoric Period reflects spear thrower diffusion from the Old World. He considers that the heavier stone projectile point had flight advantages over a postulated early wood or bone tipped shaft. This functional argument is weakened when one considers that Eskimoan bone tipped darts were successfully used with atlatls (e.g., Dumond 1977:18; Oswalt 1967:158, 159). However, the presence of spear throwers in European Upper Paleolithic (Magdalenian) assemblages (e.g., Butzer 1971:474) indicate that Bryan's hypothesis is not impossible. One might then suggest that the side notched point diffusion could reflect a significant improvement in the weapon system, perhaps the introduction of flexible shaft atlatls with weights (see Palter 1976), or of smaller fletched darts. Brink (1986a) reports a probable atlatl weight from the Grande Cache area of the northern Rocky Mountains, and Ronaghan (personal communication 1986) notes that a specimen is known from Waterton Lakes National Park in southwestern Alberta. The possibility that small darts were fletched is based on a reconstruction tested by D. Gardner (personal communication 1986). Thus, while I shall continue to follow Reeves' (1969) hypothesis regarding weapon system changes, it must be remembered that other explanations are possible.

## MIDDLE PREHISTORIC PERIOD

The Middle Prehistoric Period is generally well represented by excavated components in Alberta; some 62% of all phase-assigned components in the province are Middle Prehistoric in age (Figure 3). Of the 536 components tabulated for this period, about 7% are assigned to the Early Middle Prehistoric I, 42% to the Early Middle Prehistoric II, and 51% to the Late Middle Prehistoric. Thus, the earliest part of the period remains rather poorly documented in Alberta.

### MIDDLE PREHISTORIC ENVIRONMENTS

Environmental change during the Middle Prehistoric Period has played a prominent role in the reconstruction of prehistory ever since Mulloy (1958:208) noted a hiatus in the paleocultural sequence between 7,000 and 5,000 years B.P. As Reeves notes:

> The concept of a cultural hiatus, when it is believed the Northern Plains was essentially abandoned by prehistoric bison-hunting cultures because of extremely adverse climatic conditions in the interval 5500 - 3000 B.C. has become generally entrenched in archaeological thought and literature (Reeves 1973a:1221).

While the cultural hiatus is now no longer considered a universal event on the Plains, the nature of the "... adverse climatic conditions..." (ibid.) and their implications for human adaptation remain the subject of lively debate. A historical review of the issues is readily available (see Reeves 1973a).

The concept of a mid-Holocene warm and/or dry period - the Altithermal (Antevs 1955) - was originally viewed as a gradual warming to a maximum, followed by gradual cooling to modern conditions. Subsequently, an episodic model involving rapid transitions between quasi-steady state climatic episodes was postulated, and the Blytt-Sernander terminology was introduced (Bryson and Wendland 1967; Bryson et al. 1970; Wendland 1978). The Altithermal became the Atlantic Period of ca. 8,500 - 5,000 years B.P. (see Figure 2). It was recognized that the direction of climate change need not be the same from region to region, but synchroneity of change was postulated since the atmosphere is a closed system. More recently, consideration of the Milankovitch Theory and the influence of the residual Laurentide ice sheet suggests that the

time of maximum Holocene warmth may be nonsynchronous between regions (Ritchie et al. 1983). It is obvious that, regardless of the climatic model employed, the chronology, direction and magnitude of environmental change should be determined on a regional basis.

While many Northwestern Plains archaeologists cite the Blytt-Sernander model (e.g., Reeves 1969, 1973a; Dyck 1983), the most detailed attempt to use paleoenvironments as an explanatory device for culture change in the Middle Prehistoric Period is by Buchner (1980, 1981). The technique used by Buchner involves correlation of modern surface pollen samples with modern climatological data, the derivation of transfer functions relating those variables, and the application of the transfer functions to pollen frequencies from palynological cores to derive the climatic parameters operant in the past. He (1980:70) believes this method to be objective; consider his reconstruction of the "Atlantic Climatic Episode":

> Statistical reconstructions of mean climatic parameters based on pollen frequencies for this interval indicate that the temperature rose 2°F (1°C), and annual precipitation declined by 25%. This involved both less rain in summer and snow in winter. The growing season was longer by about 1 week and was warmer overall. Skies were probably clearer and the weather characterized by fewer summer and winter storms. These changes are associated with increased force and frequency of the prevailing westerly winds (Buchner 1980:85).

Unfortunately, this interpretation and reconstruction exceeds the resolution which can as yet be reasonably expected from palynology. The collection technique employed to measure the modern pollen rain can introduce biases which render the derived transfer function suspect when compared to core-derived pollen frequencies (Kroker 1979). Plant migration rates and the lack of modern analogues for some of the earlier vegetative communities may also cause problems. As well, Ritchie notes:

> ... pollen taxa that include two or more species with different geographical ranges (Betula, Alnus, Cyperaceae, Gramineae, Artemesia) often show bimodal or trimodal pollen frequencies along the climatic gradients, with obvious blurring or spurious effects on the multiple regression equations and the resulting climatic estimates (1983:167).

Buchner's (1980:62) analysis includes three of the five taxa listed by Ritchie. In addition, it should be noted that the transfer functions

used by Buchner to reconstruct the Plains paleoclimate were applied to Driver's undated pollen cores from Crowsnest Lake (ibid.:65). That large (3x0.5 km) lake, situated on the continental divide west of the Plains, is unlikely to reflect the regional macroclimate accurately; as Bryson notes:

> A climate consists of an array of microclimates. The regional macroclimate may be thought of as the model microclimate. Depending on the topography, soil types, etc., the spread of microclimates may be very large or very small. It is small on broad, flat plains with uniform soil and very large in mountains or highly heterogenous terrain (1985:276).

In essence, neither the transfer function technique nor the core it was applied to engender confidence in the results obtained.

The classic works of palynology and climatic reconstruction employed by Northwestern Plains archaeologists (especially Borchert 1950; Bryson and Wendland 1967; Bryson et al. 1970; Ritchie 1976; Wendland 1978) are well known and need not be reviewed here (see also Buchner 1980; Dyck 1983; Reeves 1969, 1973a). In Alberta, the major syntheses of Holocene climate change are those of Schweger et al. (1981), Waters (1979), and a series of unpublished manuscripts by Vance (1983, 1984, 1986). However, since virtually all palynological data dealing with the mid-Holocene are from sites outside the Plains, this overview of central Alberta must suffice:

> Rapid warming near 11,300 - 11,200 B.P. resulted in widespread ice stagnation, and the rapid invasion of arboreal vegetation until boreal forest was established over central Alberta. This warming trend appears to have continued unabated into the early Holocene when drought and evaporation dropped lake levels and enabled prairie vegetation to expand northwards. We suggest that the period of significant drought began approximately 9,000 B.P. and continued until 6,000 B.P. at which time some lake basins began to infill. The climate of central Alberta became significantly cooler or wetter around 4,000 B.P. and soon thereafter the modern vegetation and presumably modern climate became established (Schweger et al. 1981:58).

Waters (1979) examined a number of sections from the Oldman to the North Saskatchewan drainages during a study of paleosols. She documents a cessation of alluviation and the development of widespread soils below Mazama ash, as previously discussed. Opal phytoliths in the Ah horizons indicate that short grasses were present in areas now forested (cf.

Dormaar 1983). Sedimentation resumed at, or just prior to, Mazama ash deposition, ca. 6,600 years B.P. Waters (ibid.:83) suggests a period between 8,500 and 6,600 years B.P. as the time of maximum mid-Holocene warmth and aridity.

Unfortunately, what is not known is the effect of this period of increased warmth/aridity on the Plains proper. Historic droughts are used as analogues for mid-Holocene climatic reconstruction, but during the short term historic droughts on the Plains, the Parklands received greater than normal precipitation (Findlay 1981). This is clearly inconsistent with the evidence of mid-Holocene drought in the Parklands and southern Boreal Forest (Vance 1984:13). However, until direct paleoecological data are recovered from the Alberta Plains, no alternative to the historic model is available.

Following Borchert's (1950) classic paper, Reeves (1973a:1227) postulates a mid-Holocene precipitation regime similar to that documented in historic Plains droughts. Borchert (1950) characterizes this pattern as one showing 60-70% of normal July-August precipitation; that is, the historic droughts are mainly manifested through a failure of the summer rains (ibid.:14). Reeves (1973a:1228), noting the critical relationship between spring precipitation and short grass growth (see also Clarke et al. 1942; Coupland 1959; Smoliak 1956; Tomanek 1959), visualizes an expansion of short grass plains, albeit with some forage yield reduction. Buchner (1980:102ff), however, citing various studies in exclosed plots, notes a great reduction in actual ground cover and quite correctly comments that relative frequency of short vs. mid/tall grasses is irrelevant when all vegetation is reduced by 80%.

Buchner's (ibid.:104) contention that 10 years of precipitation equal to or exceeding the modern mean would be necessary to re-establish the former composition and density of plants is misleading. The critical issue is not relative species composition, but forage yield. An examination of forage yields at the Manyberries Range Experimental Farm in the dry, short grass Plains of southeastern Alberta indicates rapid fluctuation (Smoliak 1956:89). An average of 317 lbs/acre was measured for 20 years between 1930 and 1953, but yields ranged from a maximum of 825 lbs/acre (1942) to a minimum of 90 lbs/acre (1949). Fluctuations between single years include a maximum decrease of 600 lbs/acre

(1942-1943) and a maximum increase of 180 lbs/acre (1949-1950). Over a two year period, a maximum increase of 429 lbs/acre (1940-1942) was recorded. Thus, very rapid recovery of forage yield would appear to be characteristic of the Alberta short grass Plains, and Buchner's (1980) reconstruction of continuous low forage yields would appear to be unlikely.

In any case, the arguments and analogies suffer from a lack of local Plains paleoenvironmental data. I doubt that they bring us any closer to the critical issue, that is, did the mid-Holocene climate result in such dessication of the Alberta Plains so as to reduce the carrying capacity to the extent that human cultures were no longer able to rely on bison procurement for their sustenance? As yet, this problem can only be approached through archaeological, not paleoenvironmental, data.

## EARLY MIDDLE PREHISTORIC I

The archaeological complex(es) of this period remain poorly known; while the data have increased markedly since the time when researchers believed the cultural hiatus theory, much of the data hints at a cultural complexity not yet understood. The earliest occurrences of side notched points on the Alberta Plains are at the Hawkwood site Component 1 (8,250±330 years B.P.) and Boss Hill Site Locality 2 (7,875±130, 7,750±105 years B.P.) in association with late lanceolate points as previously described. While faunal diversity is marked at Boss Hill, bison remains dominate in both sites. There seems to be no compelling reason to believe that these occupations represent anything but bison oriented Plains cultures, on the understanding that multiple resources might be exploited due to any of a variety of particularistic circumstances. Presumably, these sites represent a transition from the Early Prehistoric Period to the Middle Prehistoric Period.

Bitterroot

### THE MUMMY CAVE SERIES

Reeves (1969:30) uses the term Mummy Cave Complex to subsume the side notched point tradition of this time, rejecting Swanson's (1962:155) term Bitterroot as too closely linked to hypothetical ancestral

Shoshoni. Dyck (1983) prefers the term Mummy Cave Series in recognition of the probability that more than one complex is represented; I concur with his evaluation. Gryba (1980), Frison (1978), Husted (1969), and Buchner (1980) have discussed the relationship of the eastern and western early side notched point occurrences. Walker (1980:157ff) has suggested a provisional typology of early side notched points. These include Mount Albion Corner-Notched, Gowen or Salmon River Side-Notched, Hawken Side-Notched, Northern or Bitterroot Side-Notched, and Blackwater Side-Notched. However, further research is necessary to demonstrate the temporal and geographical utility of this typology; Walker is pursuing the problem (personal communication 1984). The known sites from the Alberta Plains are described below (Figure 11).

The Stampede Site (DjOn-26)

Gryba's (1975, 1980) excavations at the Stampede Site (DjOn-26) in southeastern Alberta yielded a radiocarbon date of 7,245±255 years B.P. in association with Bitterroot points in cultural layer 12A. The site, situated by a small creek at the base of the northern escarpment of the Cypress Hills, is deeply buried and only 7 square metres of excavation area sampled this early component. However, a shallow basin-shaped hearth, five projectile points or fragments, two bifaces, a drill tip, some retouched flakes and over 4,600 flakes and shatter were recovered. The points were identified as Bitterroot (see Gryba 1980:47, Fig. 7), although Walker (1980:162) classifies them as Blackwater Side-Notched. About 25% of the lithics are local quartzites but other materials such as cherts, a brown chalcedony (Knife River Flint?) and obsidian suggest links to the south. A number of charred bone fragments may indicate bone grease extraction. Identifiable mammals include bison and elk; seasonality is unknown.

Site EgPn-146

Site EgPn-146, located in an infilled swale on the Nose Hill Uplands a few kilometres from the Hawkwood site, yielded two undated components below Mazama ash (Head and Van Dyke 1982; B.W. Wright 1983). The deposits are rather shallow (80 cm) and moderately disturbed by rodents. Most of the assemblage is fashioned of local siltstone and quartzite

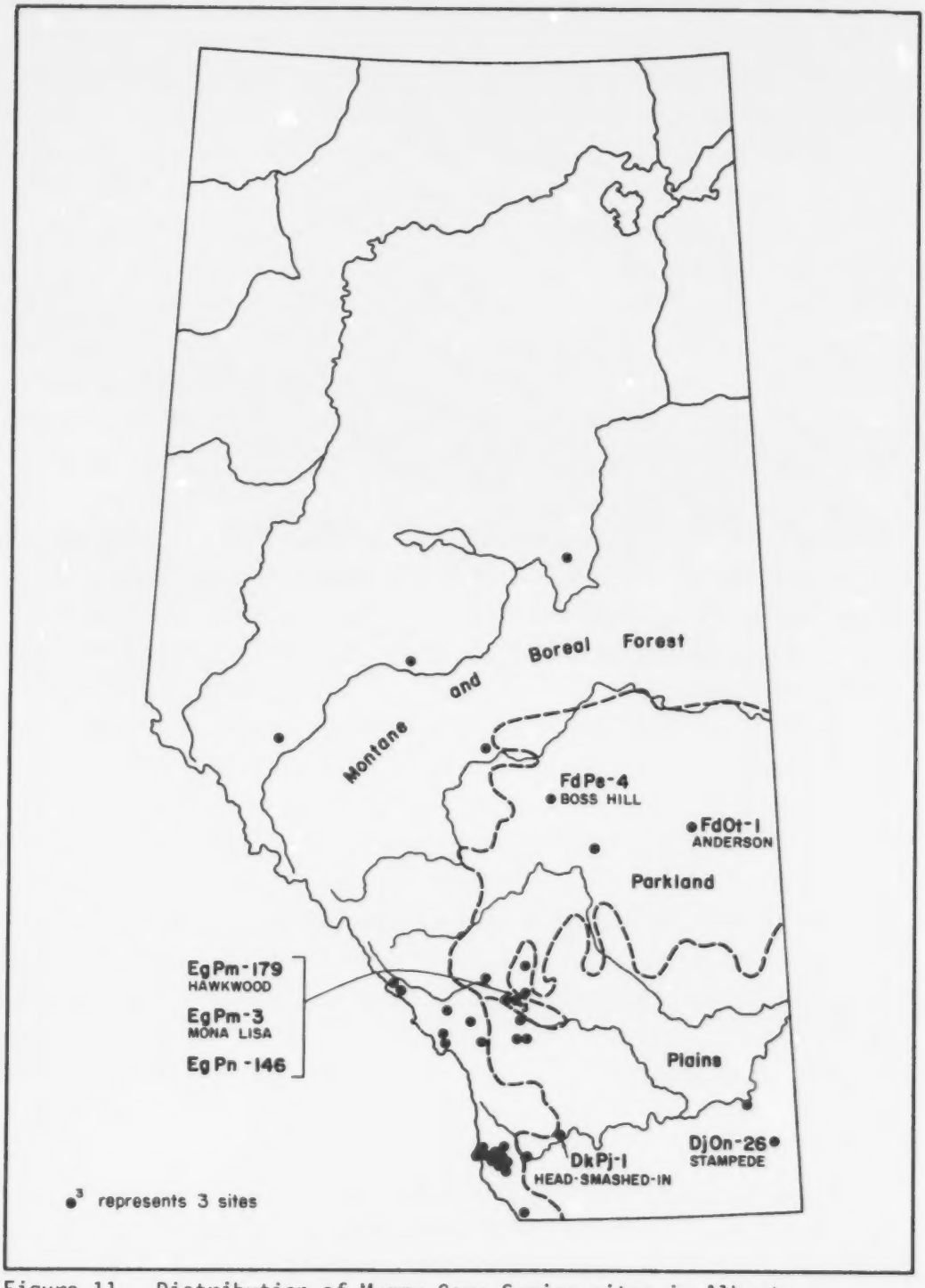



Figure 11. Distribution of Mummy Cave Series sites in Alberta (vegetation zones illustrated are modern).

cobbles, although a few exotic lithics are from the Top of the World chert quarry in British Columbia. The projectile points, some probably displaced by rodent activity, show several morphological variations. They include specimens similar to Salmon River points, Boss Hill Corner-Notched, and a barbed "Pelican Lake-like" form which compares well with points from cultural levels 23 and 24 from the Mummy Cave site (McCracken et al. 1978, Plate 59e). Site EgPn-146 shows considerable cultural complexity and, if the dates from the Mummy Cave site are comparable, considerable antiquity.

The Mona Lisa Site (EgPm-3)

Mummy Cave Series points also occur above Mazama ash. The Mona Lisa Site (EgPm-3) Locality C in Calgary, contains two such components (Wilson 1974, 1980, 1983). The upper is dated to 5,145±170 years B.P. (GX-6394-A) and the lower to 5,470±150 years B.P. (GX-6395-A). Both components represent bison kills. The lower component contains seven bison, including foetal animals, while the upper contains two. The former is interpreted as a late winter kill. The artifacts, a pièce esquillée, flakes, choppers, cores and hammerstones are of quartzite or basalt. The upper component contained one Bitterroot point. Two broadly side notched specimens generally similar to the Boss Hill or the Gowen site specimens from Saskatchewan (Dyck 1983:93; Walker 1984) occur in the lower component.

The Anderson Site (FdOt-1)

Quigg (1984:156) has reported a very late series of dates averaging about 4,275 years B.P. from a Mummy Cave component at the Anderson site (FdOt-1) in central Alberta. Quartz, quartzites, local pebble cherts, and petrified wood form the lithics; the assemblage includes six Bitterroot points. The identifiable fauna are bison. Burned and calcined bone fragments are present.

Head-Smashed-In Buffalo Jump (DkPj-1)

At Head-Smashed-In buffalo jump (DkPj-1), on the edge of the Plains in southwest Alberta, Reeves (1978b) encountered Mummy Cave materials in the lowest cultural component. Bracketing dates of 4,050±100 years B.P.

(GaK-1416) and 5,410±300 years B.P. (GSC-803) in the south excavation area, and of 5,080±120 years B.P. (RL-333) and 5,660±100 years B.P. (RL-334) in the north area were obtained. Reeves (1978b:164) notes that the bison bone in the Mummy Cave levels was both abundant and well preserved. The points are Bitterroot, Salmon River, and corner removed specimens reminiscent of Boss Hill Corner-Notched or the "Pelican-Lake-like" points previously noted at EgPn-146. Large quartzite flakes were apparently used for butchering.

DISCUSSION: EARLY MIDDLE PREHISTORIC I

Early side notched projectile points are widely distributed in North America and apparently occur earliest in the Eastern Woodlands (see Buchner 1980:157ff for a review). Husted (1969:88) considered the distribution to represent an actual population movement from the east to the Rocky Mountains in the west. Reeves (1978a) also considered the distribution to represent an actual population expansion of atlatl-armed people from the eastern prairie fringe since, at the time that he wrote, there were no known transitional components containing both lanceolate and side notched points. This situation has changed and I have argued above that the distribution of side notched points represents the diffusion, presumably from the Eastern Woodlands, of a new weapon system into terminal Paleo-Indian populations. Given the great variety of environments wherein side notched points occur, homogeneity of either population or adaptation would seem unlikely. That is, the occurrence of side notched point components need not imply a universal adaptation to an archaic lifestyle wherever the points occur.

In Alberta, the known site types of this period include a classic bison jump, other bison kills, and campsites. Many of these are multicomponent sites containing evidence of occupation by later cultures. Where faunal remains have been recovered, bison dominate the faunal assemblages. With the exception of pottery, the tool kits contain items common to all later bison hunting complexes on the Northwestern Plains (Dyck 1983:92). In summary, site types, subsistence, and tool kits suggest a Mummy Cave Complex adaptation to the Alberta Plains which is qualitatively no different from that of later bison hunting cultures.

If there were differences in scheduling of seasonal round, processing of bison carcasses, etc., these have not yet been demonstrated.

Quantitatively, the problem is less clear. Only some 36 sites were assigned to the Mummy Cave Complex in my review of the data, and many of these are located in the mountains (Figures 3,11). Reeves (1973a:1243) suggests that this is due to sampling problems, in particular, the research areas examined, typological confusion with Late Prehistoric material, and either deep burial or erosion of terrace surfaces occupied in the Early Middle Prehistoric I Period. While at first blush these might seem weak arguments, it should be remembered that most sites recorded are surface finds of diagnostic points. Misclassification of early side notched points into a late category (probably Besant), and of terminal Paleo-Indian points into the earlier Agate Basin category, would tend to reduce the number of recorded sites from this time. As well, the problem of archaeological visibility due to geomorphological processes noted for the Early Prehistoric Period (Wilson 1983) apparently continues through the Early Middle Prehistoric I Period. Schweger (personal communication 1984) suggests that a rise in lake levels after this period may have inundated any sites located adjacent to such water bodies, again creating a sampling problem. If these concepts are correct, the apparent paucity of Mummy Cave Complex sites on the Alberta Plains does not reflect the actual intensity of occupation at this time.

In summary, the Early Middle Prehistoric I Period contains a number of projectile point types lumped under the term Mummy Cave Complex. Sites of this period are rare, but those known appear to be the remains of bison hunting cultures. As Buchner notes: "The Mummy Cave Complex represents a fundamental continuation of the technology, economy and a basic way of life established some thousands of years earlier" (1980:159). In the Alberta Plains, this continuity suggests that no significant break occurred in the bison oriented economy due to the Hypsithermal maximum.

## EARLY MIDDLE PREHISTORIC II

This period, dating approximately 5,000-3,500 years B.P., evinces two major cultural units on the Alberta Plains: the Oxbow Complex and the McKean Phase. In the adjacent mountains, the Mummy Cave Complex

apparently continues (Reeves 1978a). The relationship among these cultural units is poorly understood, although Reeves (ibid.) speculates that Oxbow developed from Mummy Cave as a result of culture contact and technological exchange with McKean. The latter is thought to be intrusive from, ultimately, the Great Basin or Rocky Mountains of the United States (see Brumley 1975:101).

THE OXBOW COMPLEX

The Oxbow Complex is a Northwestern Plains manifestation located primarily in the Saskatchewan Basin, northern Montana and the Dakotas. The point type is known also from the Peace River region, southeast British Columbia, the Parklands and Boreal forest of Western Canada (Millar 1981a:84), and somewhat similar cultural materials are present in Wyoming (Frison 1978:45). Spurling and Ball (1981) discern a chronological trend in the distribution of Oxbow sites, with the earliest sites being in the Plains area and the later manifestations located in the forest regions on the periphery.

Oxbow

Although no bison kill sites have been discovered, the quantity of bison represented in the Harder campsite in Saskatchewan suggests that communal hunting techniques were practised (Dyck 1977:55). A great variety of additional game animals are also known for the complex, but Plains sites are dominated by bison. Fishing is inferred for sites on the periphery.

Oxbow components excavated in the Alberta Plains are relatively rare (Figure 12). Cultural layers 7 and 8 at the Stampede Site (DjOn-26) were identified as Oxbow (Gryba 1975:103ff). However, only 9 square metres were excavated and activity areas were not well defined (ibid.:114). The Castor Creek site (FbOw-1) in central Alberta contained Oxbow materials but has not been described in detail (Wormington and Forbis 1965:113). A copper crescent, presumably related to the Old Copper Culture of the Great Lakes area, is often attributed to the contemporaneous Oxbow Complex at Castor Creek. However, the artifact was found in the creek bed downstream from the site and its association with the Oxbow occupation is uncertain (see Millar 1981a:85). Only the Southridge site

Figure 12. Distribution of Oxbow Complex sites in Alberta (vegetation zones illustrated are modern).

(EaOq-17) in Medicine Hat, and the Majorville Cairn (EdPc-1) have been sufficiently examined to warrant discussion here (Figure 12).

The Southridge Site (EaOq-17)

The Southridge site is a small Oxbow campsite located on prairie level in Medicine Hat (Brumley 1981). Subarea B was discovered during monitoring of topsoil stripping, with cultural material being noted from 20 to 40 cm below the original ground surface. On the basis of distributional data for artifacts, fire broken rock and features, Brumley (ibid.:47) has defined two activity areas centred on pairs of hearths and boiling pits. These are interpreted as activity loci of two family or residential units. Two radiocarbon dates on bone are considered acceptable: 4,160±150 years B.P. (RL-1534) and 4,260±140 years B.P. (RL-1535).

The Southridge site assemblage consists of 3,207 faunal pieces, 2,342 fire broken rock fragments, 17 cores, 2,470 pieces of debitage, 68 marginally retouched stone tools, two end scrapers, 23 bifaces, four unifaces and 21 projectile points. Seventeen of the points are typical eared Oxbow points, three are triangular unnotched specimens, and one is an undiagnostic tip. It is unknown whether the triangular specimens are preforms, as Dyck (1977:90ff) interprets for the Harder site, or are finished triangular styles such as occur in low frequencies in McKean, Avonlea and Old Women's phase sites (Brumley 1981:87). Only four of the points are made of non-local lithics. Indeed, over 95% of the assemblage is composed of local lithics, while the remaining specimens include material from Montana and/or British Columbia, North Dakota and the Alberta foothills.

The faunal remains represent a minimum of two bison. Tooth fragments suggest animals of about four and 15 years of age. Brumley (ibid.:56) interprets the data as indicating that game was scarce, hence the utilization of an old animal. It appears that the animals were being stalked in the nearby coulees and valley. Most of the bone was concentrated in the features and none was charred or calcined. Bone breakage suggests extensive use of marrow and bone grease. Seasonality is unknown, but the exposed site location suggests an occupation other than winter.

The Majorville Cairn (EdPc-1)

The Majorville Cairn and Medicine Wheel, located south of the Bow River, was initially used in Oxbow times (Calder 1977). Situated on one of the highest hills in the area, the cairn consists of a boulder pile some 9 m in diameter and 1.6 m high. It is surrounded by an oval stone circle about 29 m in diameter; 26 to 28 cobble spokes extend inwards from the circle to the central cairn.

The cairn was excavated in a series of arbitrary levels parallel to the cairn contour, on the assumption that the cairn was constructed as a series of accretional domes. Despite a degree of rodent disturbance, Calder (ibid.:30ff) was able to demonstrate a normal progression of projectile point styles from Oxbow and McKean through to Late Prehistoric and Historic material. However, only five of the 254 projectile points were identified as Pelican Lake, which suggests little cairn use at that time (ibid.:204). A radiocarbon date of 3,845±160 years B.P. (S-856) from near the centre (Layer 14) is consistent with the Oxbow and McKean diagnostics (ibid.:42).

The artifact inventory from the cairn includes evidence of ceremonial items; iniskim (ammonite septa [Forbis 1960:158]), other fossils, concretions, and extensive red ochre staining of artifacts and bone were noted. Calder (1977:204) suggests that some of these items might represent medicine bundles deposited in the cairn. A great variety of utilitarian items was also present.

The apparent continuity in use and construction of the Majorville Cairn, save for the Pelican Lake Phase, suggests that a very ancient and stable ceremonial tradition existed on the Alberta Plains (Calder 1977:209). However, Forbis noted during excavation of a very similar central cairn at the British Block Medicine Wheel (EdOp-1) that: "... early point types, such as McKean and Oxbow, are as likely to be in the top as in the bottom of the deposit" (Wormington and Forbis 1965:124). He interprets this to indicate that later peoples collected and deposited these points as offerings, and that cairn construction was a rather recent event. However, a perusal of the artifact sketches on the catalogue cards from the British Block site revealed a plethora of Oxbow and McKean points, as well as Besant, Avonlea, and Late Prehistoric specimens, but no obvious Pelican Lake points. It is difficult to

understand why Pelican Lake points would be rare or absent in both cairns if the collection/offering mechanism is invoked. The presence of many Oxbow and McKean specimens at both sites would, indeed, seem to indicate that ceremonial cairn construction was initiated at this time.

Comments: Oxbow Complex

Oxbow sites from the Parklands and Boreal forest may be generally later than the Plains manifestation (Spurling and Ball 1981). Gibson (1981:136) suggests that this shift was only sporadic and might represent population pressure. Buchner (1981) suggests that increasingly severe winters of the Sub-Boreal, with deep snow, blizzards, strong northerly winds and increased freeze-thaw conditions, prevented the bison from arriving in the Parklands and forced Oxbow peoples into exploiting forest resources. Current paleoenvironmental data are not adequate to support this scenario. Harsh winter conditions were associated with bison movement into the woods in historic times, not prevention of that pattern (Arthur 1975). Dyck (1983:100), in rejecting Buchner's hypothesis, suggests that the northern Oxbow sites might simply have been occupied before the southward shift of the forest. Reeves (1978a) argues that a McKean expansion displaced Oxbow populations into the woods. Pollock (1981:152) suggests that the occurrence of the point form in the forest may represent stylistic influence and not necessarily a close cultural relationship.

THE McKEAN PHASE

Coeval with the Oxbow Complex on the Northwestern Plains, is the McKean Phase. Three projectile point styles, McKean, Duncan, and Hanna, form a stylistic continuum distinguished primarily by the degree of "stemness" (Syms 1970:125). Dyck (1983:100) states that the Hanna and Duncan points are more common in Saskatchewan than McKean points and prefers specific point-style designation over the general name "McKean." These points are sometimes found in association with Oxbow points or other "eared" forms on the Plains (Syms 1970:125; Reeves 1973a:1236). Possibly related to the McKean Complex are side and basally notched forms, and

McKean

corner and basally notched forms which occur in southern Montana and Wyoming; these are called Mallory and Yonkee points, respectively (Frison 1978:50, 204). Similar specimens, including both Humbolt and Pinto series, are widespread in the desert west of America (McCracken et al. 1979:140; Heizer and Hester 1978:156). Syms (1970) describes other artifacts known from McKean assemblages. Only the Cactus Flower site will be discussed, since it is the best McKean site known in Alberta (Figure 13).

Duncan

The Cactus Flower Site (EbOp-16)

The Cactus Flower site, located on the South Saskatchewan River north of Medicine Hat, is the most extensive McKean campsite yet excavated in the Alberta Plains (Brumley 1975). About 180 square metres of each occupational surface were excavated. Ten occupations were defined, the lowest occupation being about 5.75 m below surface. The upper two components (Occupations I and II) are assigned to the Pelican Lake Phase, while Occupations III to IX, and probably X, are assigned to the McKean Phase (ibid.:15). Radiocarbon dates range from 4,130±85 years B.P. (S-782, Occupation VIII) to 3,620±95 years B.P. (S-822, Occupation IV; ibid.:111).

The McKean levels produced 24 identifiable points including four McKean, 11 Duncan, and nine Hanna specimens. Other artifacts recovered from the McKean levels are 52 bifaces, three gravers, 34 end scrapers, four spokeshaves, 174 marginally retouched flake tools, 63 pebble cores, 73 cobble tools, eight hammerstones, three anvils, a ground stone disk, a tubular pipe, 12 bone awls, three bone beads, two shell beads, a shell disk and an ammonite septum. The distribution of these materials throughout the McKean Phase levels suggests no basic change in the nature of the assemblage over time (ibid.:74). Brumley (ibid.:73) suggests that McKean and Duncan points predominate in the early levels and Hanna points dominate the later occupations. However, the sample size is so very small that the distribution is not very informative:

Hanna

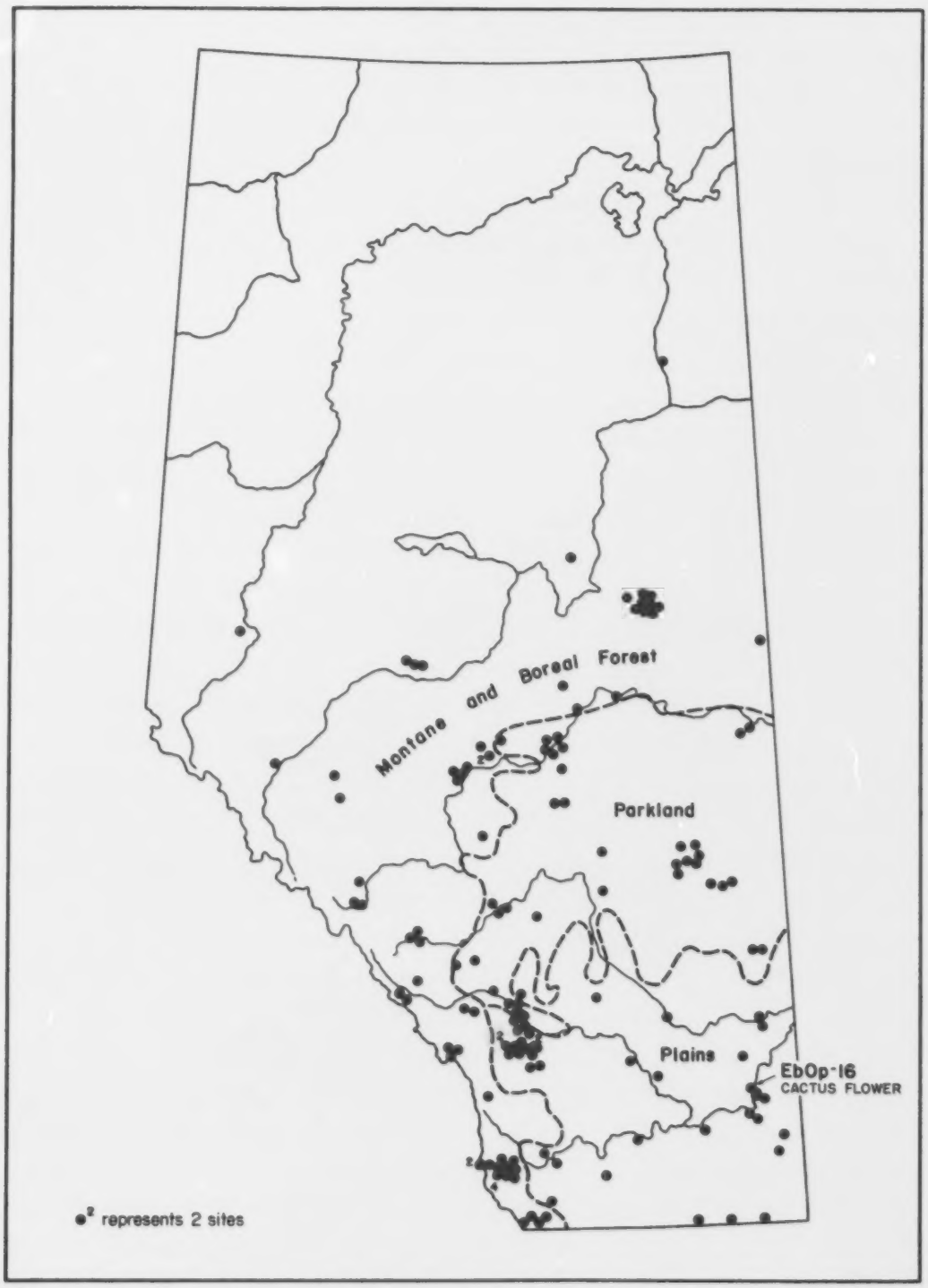



Figure 13. Distribution of McKean Phase sites in Alberta (vegetation zones illustrated are modern).

Occupation Level

| Point Types | III | IV | V | VI | VII | VIII | IX |
|---|---|---|---|---|---|---|---|
| McKean | | | | 1 | | 2 | 1 |
| Duncan | 1 | 1 | 1 | 1 | 2 | 5 | |
| Hanna | 2 | 2 | | 3 | | 2 | |

The vast majority of the lithics are quartzites and cherts derived from local sources, although minor quantities of Montana cherts, Knife River Flint, and obsidian occur.

The faunal remains from all levels are dominated by bison (N=40). Antelope (N=6), mule deer (N=1), dog (N=5), kit fox, rabbit, birds, freshwater clam and fish also occur; the latter five fauna are minimally represented. The analysis of the canid remains suggests that these were coyote-sized domestic dogs; one ca. 11 month old puppy was butchered. Age estimates on bison mandibles suggest an October/November occupation, while foetal and calf elements indicate a spring occupation. Brumley (1975:79) believes that the Cactus Flower site was occupied from early spring to late fall.

Brumley (ibid.:83) examined the faunal remains in terms of the "Schlepp Effect" (Daly 1969:149), noting that there are twice as many elements in the campsite per individual bison as there are for individual antelope. This suggests that the antelope were hunted at a considerable distance from the site and that the bison were hunted nearby.

Brumley (1975:91) considers the repeated McKean occupation of the Cactus Flower site to be a function of local topography and bison hunting techniques. The valley of the South Saskatchewan River in this reach is very deep; sheer cliffs of up to 90 m orevent access along much of its length. Near the site location, however, slopes provide easy access to the river. It is argued that McKean hunters chose the location in order to ambush bison attempting to water or ford at this spot. The steady decline in site use after Occupation VIII is thought to reflect a shift in hunting techniques, perhaps to ones employing jumps and pounds.

Comments: McKean Phase

It is generally thought that McKean is derived from the Great Basin via Wyoming, with the Northwestern Plains at the terminus of the migration (Reeves 1978a; see review in Brumley 1975:101). Husted

(1969:91) considers McKean and similar point forms to have been made by speakers of the so-called Aztec-Tanoan languages in the northern (U.S.) Rocky Mountains, with the occurrences both east and west representing subsequent migrations. In any case, the earliest radiocarbon dates for McKean sites in Wyoming are generally earlier than those for the Canadian Plains (Syms 1970:131; Frison 1978:53).

Benedict (1981:87) favours a mountain-foothill origin in Colorado-Wyoming-Montana, and believes that McKean and Duncan forms are derived from James Allen and Pryor Stemmed points; this transition supposedly occurred in mountain refugia during the Altithermal. Husted (1969:86) also considers this possibility, but believes that derivation is ultimately from the Scottsbluff point. Although the derivation of McKean remains obscure, it appears to have occurred elsewhere than on the Canadian Plains.

The co-occurrence of three point styles in the McKean Phase has been interpreted in a number of ways. Reeves (1978a) considers these to represent temporal variants, noting that McKean devolves into a Duncan-Hanna-Pelican Lake continuum. Husted (1969:89) proposed that the variety of point styles reflects linguistic diversity within the Aztec-Tanoan population. Syms (1970:137) suggests that the point styles represent separate interacting ethnic groups analogous to the historic Cree and Assiniboine. Brumley (1975:100) argues that the points represent stylistic change through time which is somewhat obscured by small sample sizes and, perhaps, variation in preference on a regional basis. Finally, Frison (1978:49) reviews the various interpretations of the point styles, including ethnic, raw material or functional difference, and concludes there to be no satisfactory explanation.

## DISCUSSION: EARLY MIDDLE PREHISTORIC II

Reeves (1973a:1245) argues that Oxbow develops locally from the Mummy Cave Complex; Frison (1978:45) and Walker (1980:157) would appear to concur. In Alberta, Oxbow is recognizable by about 5,500-5,000 years ago (Figure 2). McKean appears in the province about 4,200 years ago, about 500 years later than in the Wyoming Basin. This is consistent with the hypothesis that McKean is intrusive in Alberta (Brumley 1975:102;

Reeves 1978a). Both McKean and Oxbow are present in the province for about 700 years.

Spurling and Ball (1981) posit a northward shift of Oxbow through time. Evaluation of their data is made difficult by their selection of the earliest site dates for trend surface analysis, as well as other problems with the data base (ibid.:95). The later initiation of northern Oxbow settlement may indicate a shift in occupation, or an expansion of the area occupied. While Spurling and Ball (ibid.:101) interpret the data to indicate the former, the radiocarbon dates from the Gray Burial site indicate a continued occupation of the Plains, supporting the latter interpretation. Although Reeves' (1978a) contention that pressure from McKean hunters displaced Oxbow from the Plains is possible, the radiocarbon dates indicate a joint McKean/Oxbow occupation of the Northwestern Plains for at least several hundred years.

This discussion, of course, assumes that McKean and Oxbow represent actual ethnic entities and that the McKean intrusion is an actual movement of people. Syms (1970:137) goes further, suggesting that the McKean, Duncan, and Hanna points represent three separate ethnic groups within the McKean Phase. While this is debatable (see Gordon 1979:62), especially if the point variants represent temporal change, many Northwestern Plains archaeologists would probably not dispute the McKean/Oxbow ethnic differentiation. While ethnicity is a difficult concept to define in terms of the archaeological record, it is apparent that McKean and Oxbow are visualized as separate cultures which are presumed to represent separate ethnic units.

The case for Oxbow as an ethnic unit is enhanced by the data from the Gray Burial site in Saskatchewan (Millar 1981b). Over 300 individuals were recovered from 99 burial units, each containing from one to 14 individuals. While a number of primary, extended burials occurred, most were bundle burials. Fragmentation of post-cranial bone, removal of the articular ends of the long bones, and rubbing of ochre on the bones were noted. Grave goods were relatively rare but included Oxbow points, notched bifaces, end scrapers, shell gorgets, copper beads and eagle talons. No obvious age/sex correspondence of artifacts with individuals was apparent, and the grave goods were interpreted as "gifts" rather than as personal property of the deceased (Millar 1981b:112).

It is apparent that the bodies were exposed, and perhaps artificially defleshed, and subsequently bundled for transport from the death locale to the ultimate repository at the Gray site. Radiocarbon assay indicates that this occurred over a period of 2,000 years, the earliest date being 5,100±390 years B.P. (S-647) and the most recent being 2,915±85 years B.P. (S-1449; Wade 1981:122). The use of this cemetery over such a long period must surely imply extraordinary stability and cultural continuity.

## LATE MIDDLE PREHISTORIC

The late Middle Prehistoric Period, dating approximately 3,500 to 1,200 years ago (Reeves 1973a:1222), includes two phase constructs on the Alberta Plains: Pelican Lake and Besant. Reeves (1983a:37) includes Hanna within this period having previously (1969:33) assigned it phase status, but Hanna is not generally distinguished from the McKean-Duncan-Hanna continuum by other archaeologists. Dyck (1983:107) also includes an "Un-named Complex" and the Sandy Creek Complex (Wettlaufer 1955; Dyck et al. 1980). The latter is now accepted by Reeves (1983a:14), although he originally considered it indistinguishable from Besant (ibid.:144).

The latter part of this period is coeval with the Avonlea Phase, ca. 1800-850 years B.P. However, Avonlea is assigned to the Late Prehistoric Period. This curious condition reflects the presumed technological basis of the taxonomic framework, with Besant being a Middle Prehistoric atlatl-using culture and Avonlea being a Late Prehistoric bow-using culture. This rather awkward construct will probably collapse in the near future; Dyck (1983:110) has already introduced a primarily temporal separation of his Middle and Late Plains Indian Periods in Saskatchewan. As well, the appearance of small Pelican Lake point variants suggests the possible introduction of the bow and arrow at an earlier date (Brumley, personal communication 1982; Dyck 1983:107). Reeves (personal communication 1984) claims that the neck thickness of the small Pelican Lake specimens precludes their use on small diameter arrow shafts. Detailed analyses are required to resolve this problem of whether or not the Middle and Late Prehistoric Periods can be separated on the basis of weapon systems.

The NAPIKWAN and TUNAXA TRADITIONS

As noted in the introduction, two cultural traditions which bridge the Middle and Late Prehistoric Periods have been proposed (Reeves 1969, 1978a, 1983a). Reeves' original discussion defined a cultural tradition as "... a series of serial phases, primarily characterized by point types which show overlapping continuity in styles" (1969:33). Three phases, Avonlea, Besant, and Pelican Lake, were formally compared on the basis of a number of cultural traits or systems (Reeves 1983a:41ff), but other cultural units have been included in the traditions on an ad hoc basis (Reeves 1978a).

Reeves (1969) proposed that McKean, Hanna, Pelican Lake and Avonlea formed a single cultural tradition designated TUNAXA. He further proposed that Besant and Old Women's constituted another tradition designated NAPIKWAN. Reeves (ibid.:34) suggested three possibilities for the origins of TUNAXA: derivation from Oxbow, intrusion from the mountains, or indigenous origin in the Northwestern Plains. NAPIKWAN was thought to represent a population intrusion from the northeastern periphery of the Plains. Reeves (ibid.:36) noted problems with the definition of the Old Women's Phase and its relationship to TUNAXA and NAPIKWAN.

Since the original definition of the two cultural traditions, considerable work has been conducted on the Plains and in the southern mountain passes (see Reeves 1972 and Driver 1978 for summaries) Reeves (1983a), in the foreword to his recently published Ph.D. dissertation, and in a number of unpublished revised chronological charts kindly made available to me, has substantially expanded the numbers of phases included within the two tradition concept. While aspects of this scheme are discussed later, a brief overview may be useful here.

Reeves (1978a, 1983a) currently proposes that Mummy Cave gives rise to Oxbow on the Plains. The NAPIKWAN tradition now includes Oxbow, Sandy Creek, Besant, and Old Women's phases. Mummy Cave is not formally included in the NAPIKWAN tradition, but Reeves' (1983b) chronological chart suggests that this will eventually be proposed. TUNAXA includes McKean, Hanna, Pelican Lake, Avonlea and Tobacco Plains phases. Avonlea is thought to contribute to both the Tobacco Plains Phase in the

mountains and the late Old Women's Phase on the Plains. This system may be schematically illustrated:

Although the cultural units are listed in chronological order in each tradition, the actual chronology is illustrated in Figure 2. Influence from the TUNAXA tradition on the late Old Women's Phase is indicated by the arrow.

I should note that this cultural tradition scheme is commonly used by students of the Calgary school but is far from universally accepted by other Northwestern Plains archaeologists (e.g., Johnson 1977:38). This undoubtedly reflects the lack of detailed formal analysis of the cultural units involved and the rather ad hoc approach to linking the phases. Alternative theories regarding the origins and relationships of the cultural units are discussed elsewhere in this essay.

## THE PELICAN LAKE PHASE

About 3,300 years ago, Pelican Lake appeared on the Alberta Plains (Reeves 1983a:5). Similar dates for the initiation of Pelican Lake are proposed for Saskatchewan (Dyck 1983:105) and for the Wyoming Basin (see Figure 2; Frison 1978:59). Reeves (1983a:7), noting technological continuity between the McKean and Pelican Lake levels at the Cactus Flower site (cf. Brumley 1975:73) and the occurrence of isolated Hanna points in basal Pelican Lake components (Reeves 1978a), assigns Pelican Lake to the TUNAXA cultural tradition. However, he notes that formal

Pelican Lake

analysis is required to substantiate this hypothesis (1983a:7). Husted (1969:92) also saw continuity between McKean and Wyoming corner notched points, ascribing these again to the Aztec-Tanoans. Dyck (1983:59), noting the widespread distribution of tanged and corner notched points, is unwilling to speculate about Pelican Lake origins.

Reeves (1978a, 1983a) suggests that Pelican Lake forced late Oxbow into the forest north and northeast of the Plains. He (1983a:4; see also McCullough 1982:30) considers the Pelican Lake site distribution to include the parklands as well as the Plains. Although a number of Pelican Lake sites are located north of the parklands (Figure 14), Reeves (1983a:4) disputes the identification of the northern specimens. However, Meyer (1983b:159) considers Pelican Lake points in the Saskatchewan Boreal Forest to derive from northern Alberta.

The recent publication of Reeves' dissertation (Reeves 1983a) provides a convenient source for his description of Pelican Lake, Besant and Avonlea phases; it would be redundant to repeat it here. However, excavations at a buried tipi ring site in Calgary may bear on the problem of Pelican Lake-Besant relationships. The site is therefore briefly described here.

The Bow Bottom Site (EfPm-104)

The Bow Bottom site, situated on a terrace of the Bow River, consists of 18 tipi rings, 17 of which were in a buried soil at about 40 cm below surface (Van Dyke 1982; Ronaghan and Landals 1983). The rings can be generally characterized as consisting of large cobbles and containing large central hearths composed of massive cobbles; the latter may have served as a radiant heat source and the occupation is interpreted as a winter one. Ring diameters varied from 3.46 to 6.38 m. The rings form a linear pattern parallel to the terrace edge with a cluster of four or five rings near the north centre of the site.

The ring floors showed a relatively high density of cultural material, approximately 26 lithic items/square metre averaged across 11 rings (Van Dyke 1982:120). The range of lithic items per square metre is from about 5 to 64. Van Dyke (ibid.:88) notes a strong tendency for artifacts to be associated with the ring centre-hearth area, while

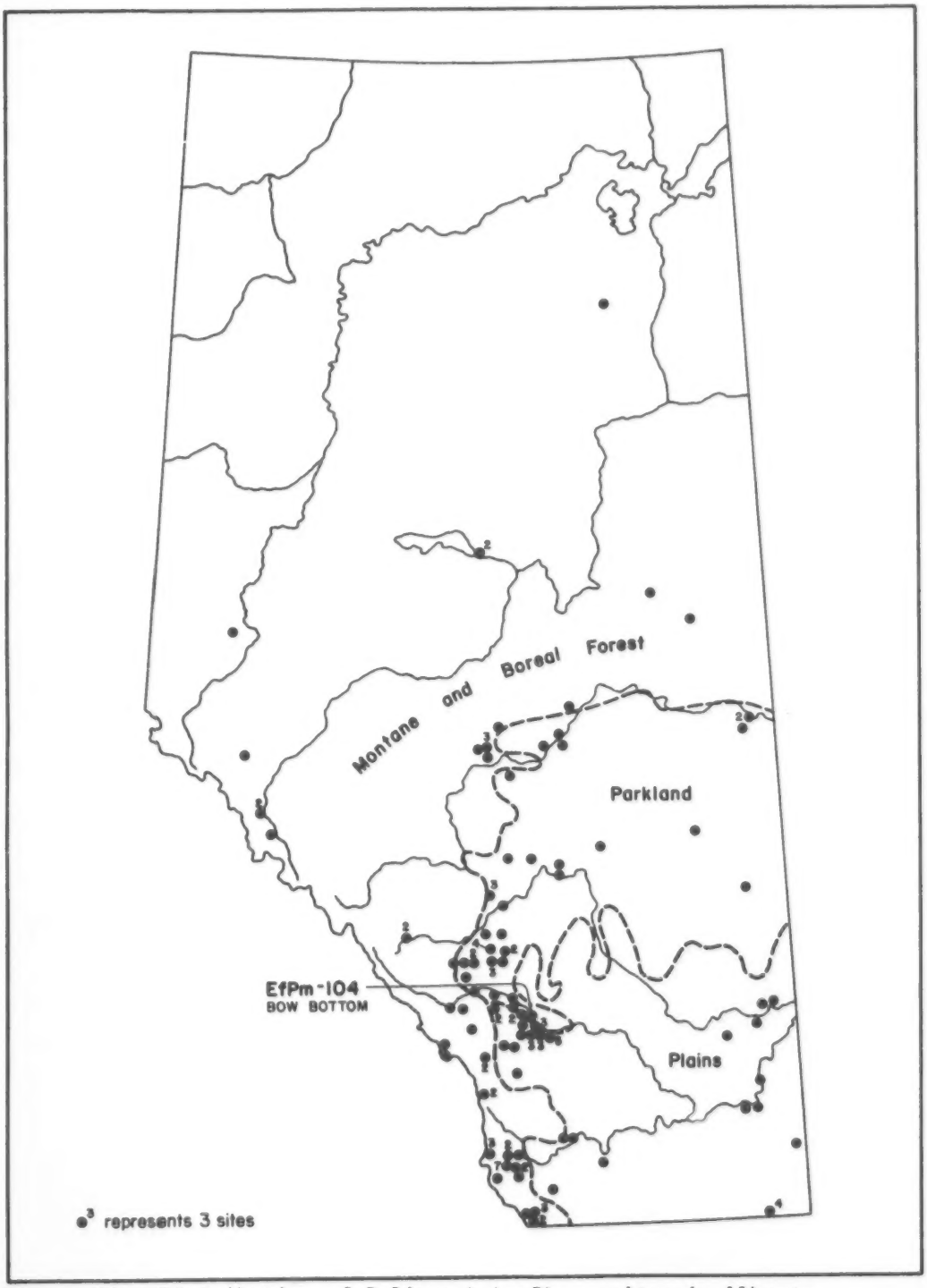



Figure 14. Distribution of Pelican Lake Phase sites in Alberta (vegetation zones illustrated are modern).

Ronaghan and Landals (1983:72), whose excavation technique maximized in situ recovery in four rings, noted that 80-90% of the assemblage was associated with one half of the ring. Presumably, these distribution patterns represent a concentration of activity around central hearths and the "public" half (by the entrance) of the lodge (see Finnigan 1982:33). Local pebble cherts and siltstones constitute 85% of the lithics, and very few exotic lithics were present. Very little faunal material was present, although both bison and deer were identified. Although seasonality could not be determined from the faunal remains, the site location, massive hearths, artifact densities and, perhaps, the emphasis on local lithics, are indicative of a winter occupation.

Both Van Dyke (1982:94) and Ronaghan and Landals (1983:67) go to some length in evaluating the problem of ring contemporaneity at the Bow Bottom site. While noting that the rings are associated with a paleosol (except Ring No. 10, excluded from this discussion), both suggest that the site represents a palimpsest of "... repeated, but functionally and seasonally consistent occupations" (Van Dyke 1982:94). Their argument is based primarily on the spatial pattern of the rings, especially on the contrast between the linear and clustered portions, and on possible evidence of "ring-robbing." Neither argument seems particularly compelling; a similar spatial pattern of tipis can be observed in historic photographs, while "robbed" gaps in a number of rings could be accounted for by the use of wood or other materials to weight portions of the lodge cover or by some stone displacement when camp was struck. While it is virtually impossible to demonstrate contemporaneity in such sites, the structure of the rings and hearths, and the artifact assemblage, suggest to me that the site represents a single, winter occupation. Ronaghan and Landals note:

> Chronological and culturally meaningful diagnostic artifacts appear co-associated on the individual stone circle floors. Individually and together these are also found on floors throughout the site. This suggests that the disparate living floors are of essentially the same cultural historical ages (1983:69).

The most parsimonious explanation is that of ring contemporaneity. Radiocarbon dates of 2530±120 years B.P. (RL-1417, Ring No. 12), 2290±120 years B.P. (RL-1528, Ring No. 4), 2640±260 years B.P. (RL-1623, Ring No.

15), and 2330±150 years B.P. (RL-1700, T-9 hearth) overlap at one sigma at 2410 B.P., and thus are consistent with a single occupation interpretation.

The problem of contemporaneity is important because of the curious mixture of projectile points. These include 18 Pelican Lake, three Besant, one Samantha, four so-called Kootenay (or Kutenai) Plains Side Notched, and eight flake points. Van Dyke (1982:96) implies that Kootenay Plains points are the same as, or similar to, Besant points and are distinguished primarily by their association with Pelican Lake. Wilson (1977:64) notes that the type has not been formally defined.

Van Dyke (1982:97) suggests a mechanism to account for these associations of forms (see also Kehoe 1974:104). He argues that classic Pelican Lake assemblages represent spring/summer sites with high frequencies of good quality exotic lithics. With winter, the good quality material is reworked and gradually exhausted. He continues:

> ... thus, winter sites would be characterized by more or less expedient tool forms which resemble the later Besant forms. One could predict, given this assumption that the projectile point forms, for example would be smaller, more crudely executed and manufactured on local materials (ibid.:98).

Comments: Pelican Lake Phase

The data from the Bow Bottom site are important in light of Reeves' (1983a) contention that Besant and Pelican Lake are part of two different cultural traditions. Reeves' lithic assemblage comparison table (ibid.:303) indicates 18 artifact types (corner notched bifaces, symmetric ovate oblique base bifaces, ovate convex base bifaces, irregular flake butt drills, t-butt drills, ovate perforators, notched perforators, tit gravers, notched gravers, notched end scrapers, unifacial spokeshaves, cobble choppers, scraper planes, pièces esquillées, abraders, polishing stones, hand stones and grinding slabs) which are shared by Pelican Lake and Besant but not found in Avonlea. Only six types not present in Besant (concave-convex unnotched points, symmetric ovate straight base bifaces, asymmetric rectanguloid bifaces, double bit drills, irregular flake butt perforators and pointed unifacial tools) were shared by Pelican Lake and Avonlea, although the lack of Avonlea campsites in his sample probably exaggerates this difference.

Besant and Pelican Lake points occur together at Old Women's Buffalo Jump (Forbis 1962). Furthermore, what appears to be an early form of the Besant point - Sandy Creek - is often found with Pelican Lake. Sandy Creek was defined by Wettlaufer (1955:50), but Reeves saw "...no important difference between these and Besant Side Notched" (1983a:144). However, since Dyck's recent revival of the term (1983:108; see also Dyck et al. 1980), Reeves (1983a:14) accepts Sandy Creek as an early Besant form. These were found in apparent association with Pelican Lake at Head-Smashed-In buffalo jump (ibid.:143), at the as yet undescribed Sjovold site (Dyck et al. 1980; Dyck 1983:109), at Mortlach (Wettlaufer 1955), and at Walter Felt (Kehoe 1974). When the Bow Bottom site is added to the list, the case for a Pelican Lake-Besant (or Sandy Creek) relationship is not easily dismissed. However, some reconsideration of Pelican Lake-Besant relationships might well be a fruitful topic for future analyses.

Sandy Creek

THE BESANT PHASE

Dating generally to 2000-1150 years B.P., (Dyck 1983:113), the Besant Phase has been the subject of lively debate (Byrne 1973; Dyck 1983; Kehoe 1973; Morgan 1979; Reeves 1983a; Syms 1977). This debate concerns the origin of Besant, its relationship to Avonlea, and the Besant-Avonlea relationship to the Late Prehistoric side notched complex generally referred to as the Old Women's (or, misspelled, Old Woman's) Phase in Alberta. The most intensive studies of Besant are by Reeves (1983a) and Neuman (1975), while Dyck (1983) provides a useful summary.

Besant

Frison considers Besant to have been a "cultural climax" in terms of bison hunting that "... was never reached again on the Northwestern Plains" (1978:223). Dyck is also effusive about Besant adaptation, noting it "... managed to leave behind more numerous and widespread remains than any other

Samantha

single complex in Saskatchewan" (1983:113). Neither of these statements can be realistically applied to Alberta where McKean, Pelican Lake, Besant and Old Women's Phase materials occur in similar frequencies. Besant is, of course, well represented in the province; in addition to the classic sites such as the Muhlbach pound (Gruhn 1971), Old Women's Buffalo Jump (Forbis 1962), and the Kenny campsite (Reeves 1983c), a number of recent excavations have increased our knowledge of Besant Phase characteristics in Alberta. A few representative examples are briefly described here (Figure 15).

The Coal Creek Site (EhPp-1)

The Coal Creek site, located west of Calgary, consists of at least three buried tipi rings and a number of external features (McIntyre 1978). The site is particularly interesting as it is one of the few winter tipi ring sites known and, like the Pelican Lake Phase Bow Bottom site, is analogous to the ethnographic accounts of winter occupations. The most complete ring was 5.1 m in diameter. Hearths were located both within and outside the rings; these were reddish-brown stains either on surface or slightly excavated. Fire broken rock was present within the hearths as well as in discrete piles nearby. Lithic concentrations, often containing both core(s) and flakes, were defined near the hearths, adjacent to the ring rocks within the ring, and immediately external to the assumed doorway. On average, 75% of all artifacts occurred inside the rings. About 90% of the lithics, including the five Besant points, were of local origin. The presence of foetal bison bone, the predominance of artifacts inside the rings, the hearths, and the topographic locale indicate a winter occupation. Both bison and deer were utilized.

The Ross Glen Site (DlOp-2)

Another Besant tipi ring site, the Ross Glen site located in Medicine Hat, was extensively excavated (Quigg 1982). While faunal remains were insufficient to determine seasonality, the extensive meat processing suggested by the tools and fire broken rock, as well as the exposed location of the site on prairie level, led Quigg (ibid.:231) to posit a fall occupation. In addition to the 18 tipi rings (three are not

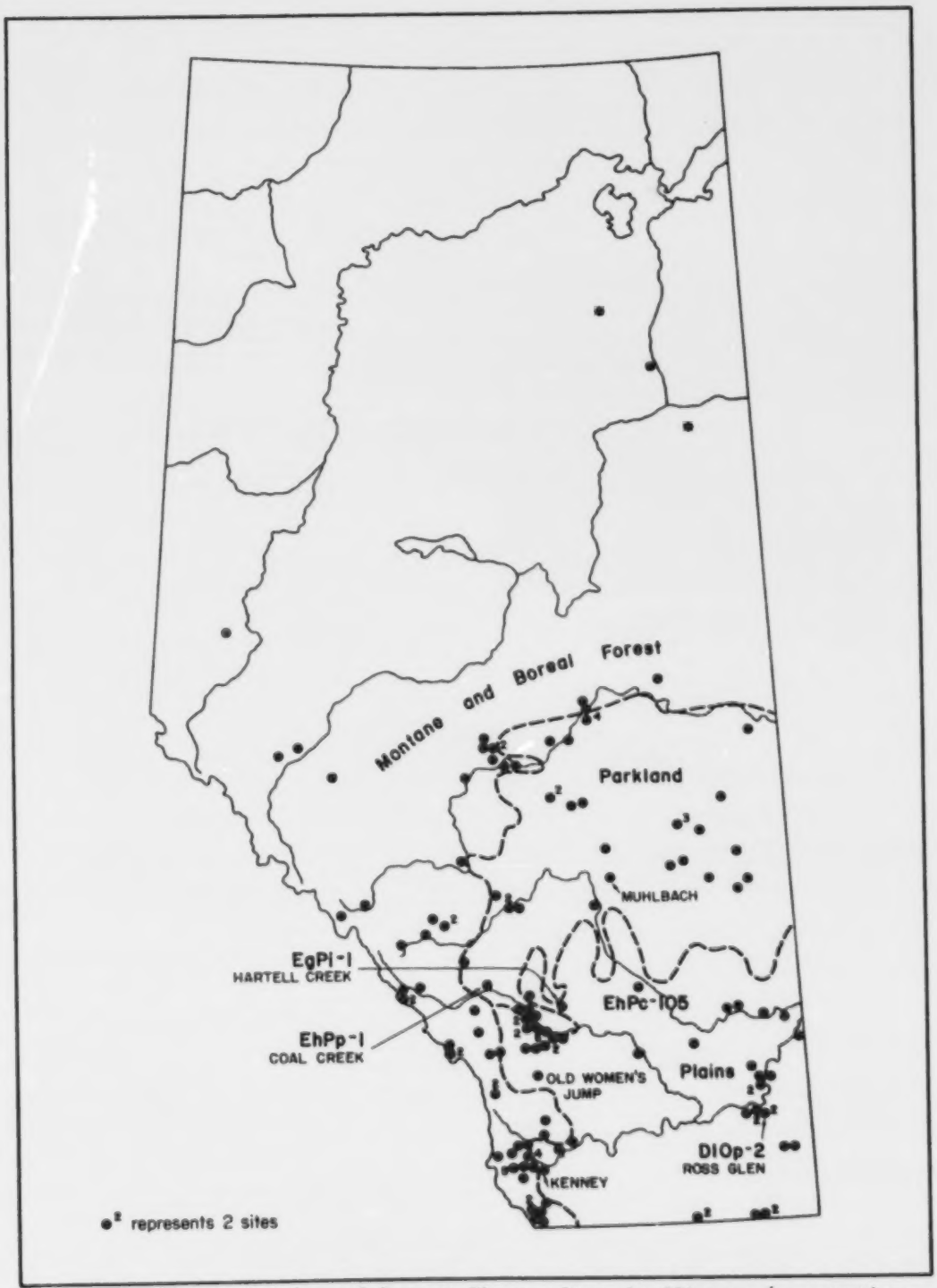



Figure 15. Distribution of Besant Phase sites in Alberta (vegetation zones illustrated are modern).

ascribed to Besant), 15 ancillary features (hearths, post molds, fire broken rock piles, etc.) were noted within the rings and 27 were discovered external to them. In two of the rings, the ring rocks were clustered in such a manner as to suggest pole locations; the complete, excavated ring may have had 19 poles, while 10 pole positions were noted in the other, half-excavated ring. As well, post molds representing central tie-down stakes were noted in four rings. Ring size is large at this site, varying from 5.9-8.03 m in inside diameter. The distribution of rings suggested to Quigg that the site was simultaneously occupied by two bands.

The distribution of excavation units was unusual for a tipi ring site. Of the 750 square metres excavated, more (450 square metres) was excavated outside the tipi rings than within those features (300 square metres). Item densities average 59 items/square metres generally distributed in a 2:1 ratio, inside vs. outside. Much of the material was concentrated in the centre and east portions of the rings. Approximately 56% of the 45,000 items recovered is lithic debitage and 43% is fire broken rock. Few formed tools were found. Ceramics were found in direct association with a Besant point, but are so fragmented that little more can be said. Quigg (1982:208) does note that the exterior surfaces contain minor undulations suggestive of smoothing of an impressed surface. Radiocarbon dates from a split sample were 1485±165 B.P. (GX-5692-A, apatite) and 1330±160 B.P. (GX-5892G, gelative); a date of about A.D.500 is compatible with the Besant points.

Site EhPc-105

Site EhPc-105, located on the northern escarpment of the Wintering Hills, contains Besant Phase ceramics (Loveseth 1983). Three Samantha side notched points - the Besant Phase arrow point (Kehoe 1974; Reeves 1983a:63) - document the phase assignment of the 34 sherds recovered. Although the sherds are small, the differing percentages of sand inclusions and of feldspar and quartzite temper suggest that two vessels are represented. Surface finish is similar on all sherds; it appears that these were smoothed in the wet state and are thus "plain." There is some suggestion of a slip.

The Hartell Creek Site (EgPi-1)

The Hartell Creek site is a multicomponent (Besant, Avonlea, Old Women's Phases) occupation east of Calgary (Murray, Smith and Reeves 1976). Several subareas corresponding to different terraces on both sides of the creek were investigated; the occupations are interpreted as campsite and bison processing locales. Foetal bison bone occurs in most components of subarea C, the campsite, suggesting that the area was repeatedly occupied in winter-early spring. Since the small valley is treeless, and likely was so in the past, an early spring occupation would seem most reasonable. The intensity of occupation and the presence of the processing area may indicate communal bison hunting at this time of year. In addition to bison, most levels contain elk, antelope, dog and badger. Rodent disturbance was moderate and this may account for the frequent co-occurrence of Besant and Avonlea points in the components; however, other interpretations are possible.

Comments: Besant Phase

Besant is widespread on the Northwestern Plains and appears in Wyoming, Montana, the Dakotas, and the prairie provinces (Reeves 1983a). Following Reeves (ibid.:10) and Dyck (1983:1144), the Sonota Complex (Neuman 1975) is considered here as a regional subphase of Besant. Syms' (1977:92) contention that Sonota is a separate complex is vigorously disputed by Reeves (1983a:13); however, Syms is correct in noting that the variation in point style and the occurrence of Besant sites with high frequencies of Knife River Flint require explanation. Sites such as Muhlbach (Gruhn 1971) in central Alberta not only show a high frequency (75%; N=61) of Knife River Flint projectile points, but also the use of this material in the rest of the assemblage. The site represents a Sonota subphase occupation well removed from its Middle Missouri home.

Sonota

Besant origins were examined by Reeves (1983a). He considered, and rejected, a derivation from Pelican Lake; as previously discussed, this may have been premature. Reeves (ibid.:156ff) also examined, and rejected, a Boreal Forest origin for the phase. Byrne (1973:466), however, considered such an origin plausible, suggesting that Besant

represented an aceramic people who first emerged in Manitoba and then spread southwestward across the Plains. This idea has been pursued by Perry (1980) who suggests that Besant represents Athapaskans (Apacheans) on their way south; however, he seems to be unaware of Besant distributional data, and this theory does not yet merit serious consideration. Lastly, as noted earlier, a new origin from Late Oxbow via Sandy Creek in the Parklands has been suggested (Reeves 1983a:14). Dyck (1983:108) assigns a date range of 2,450-1,950 years B.P. for the Sandy Creek Complex. There is not yet enough evidence to evaluate this theory, but the co-occurrence of Sandy Creek with Pelican Lake at the Bow Bottom site hardly seems to bear out the idea that this is a separate Parkland development. As discussed previously, a case can be made for the Sandy Creek or Besant complex being a minor variant within Pelican Lake. In sum, Besant origins remain obscure.

Reeves, in his 1973 discussion of Besant cultural dynamics, proposed an elegant hypothesis to account for Besant expansion:

> Besant expanded westward onto the Missouri and upriver into the Upper Missouri and Saskatchewan basins as a result of participation in the Hopewellian Interaction Sphere. This participation caused a change in social organization and communication systems.... This expansion gave Besant Peoples access to the obsidian and Knife River flint quarries.... Trade goods were shipped downriver and overland to the Illinois and Ohio Hopewellian centers in return for certain perishable and non-perishable goods (1983a:191).

The social changes, reflected in the Sonota Subphase burial mounds, suggested to Reeves that there was a marked rank structure in Besant society, possibly through pantribal sodalities which controlled communal hunting (ibid.:190). The forcing mechanism is interpreted to have been the Hopewell desire for exotics: Knife River Flint, obsidian, and grizzly bear teeth, specifically.

Supporting evidence for this hypothesis is poor. First, the acquisition of grizzly bear teeth did not require great penetration of the Plains; the Canadian distribution of the animal extended at least to the Red River of Manitoba (Banfield 1974:310). Second, the "single event" procurement hypothesis of the obsidian in Ohio Hopewell sites (Griffin 1965) and the lack of obsidian in Besant sites, suggests no concerted trade relationship; Reeves' (1983a:191) argument that obsidian

was too valuable for Besant domestic use seems flimsy (Byrne 1973:464). Third, Clark (1982) found only 43 items of Knife River Flint in the Hopewell collections, compared to high frequencies in the Sonota source sites (Neuman 1975:91). Clark concludes that "there was no concerted, organized effort on anyone's part to import large quantities of the flint" (1982:35). Thus, while denying neither contact, trade, nor communication, it does not appear that Besant was a major player in the Hopewell Interaction Sphere. The Sonota burial mound data, considered by Reeves (1983a:190) to indicate a ranked society, are interpreted by Neuman (1975:85) and Clark (1982:31) as unranked group repositories of the dead. There would appear to be no reason to suggest that Besant social integration was markedly different from other Plains buffalo hunters.

## LATE PREHISTORIC PERIOD

The Late Prehistoric Period began about 1750-1250 years B.P. and ended 225 years B.P. I have already noted that the technological definition of these periods places the Late Middle Prehistoric Period (Besant Phase) contemporary with the early Late Prehistoric Period (Avonlea Phase). Dyck defines his Late Plains Indian Period to include the Besant Phase, noting " ... I have arbitrarily chosen 2000 B.P., the approximate beginning of the Besant complex, the first ceramic complex in Saskatchewan, as the beginning of the Late Plains Indian period" (1983:110). While this formulation seems much less awkward, I have continued to follow Reeves' scheme rather than confuse the issue.

The termination date for the Late Prehistoric Period was originally defined as A.D. 1750 by Reeves (1969:20), and subsequently modified to A.D. 1725 (Reeves 1983a:36). I assume his date selections reflect the approximate time the Blackfoot acquired horses (see Ewers 1955; Jacobsen and Eighmy 1980). Byrne (1973:441) suggests terminating the Late Prehistoric at A.D. 1700 and assigning the period A.D. 1700 - A.D. 1874 to the Protohistoric Period. Byrne notes that southern Alberta was not even traversed by Europeans until Palliser's expedition in A.D. 1860 (Spry 1968), and was not subject to continuous observation until the Northwest Mounted Police arrived in A.D. 1874. I will follow Byrne's chronology, although one could argue for an earlier Protohistoric/Historic transition date.

### CERAMIC CHRONOLOGY

An additional oft-cited chronological scheme has found its way into the literature: Byrne's (1973) ceramic chronology. Byrne (ibid.:298, 441) defines three periods as follows:

1. Period I: A.D. 150-250 to A.D. 1150. The ceramics of this period, classified as the Saskatchewan Basin Complex - Early Variant (ibid.:355), associate primarily with Avonlea points but occasionally also with Besant and Late Side Notched points present in minor frequencies in mixed assemblages.
2. Period II: A.D. 1150 to A.D. 1700. The ceramics of this period, classified as the Saskatchewan Basin Complex - Late Variant (ibid.:356), associate with Late Side Notched points.

3. Period III: A.D. 1700 to A.D. 1870. The ceramics of this period include both the Saskatchewan Basin Complex - Late Variant and the Cluny Complex (ibid.:358), and associate with Late Side Notched points and historic trade goods.

Byrne's three periods thus correspond generally to the Avonlea Phase, Old Women's Phase (Prehistoric), and Old Women's Phase/One Gun Phase (Protohistoric). The occasional Besant or Late Side Notched points noted for Period I reflect styles with low frequencies in Avonlea Phase sites; these may indicate some component mixing or may be truly associated (see Morgan 1979:390). For chronological purposes, without regard to the defined ceramic complexes (Saskatchewan Basin and Cluny), the ceramic transitory modes (Byrne 1973:275) are most useful. These are attributes which seem to be confined to single periods:

| | TRANSITORY MODE |
|---|---|
| PERIOD I: | Horizontal fluting |
| PERIOD III: | Brushing<br>Grooved paddle impressions<br>Knotted cord impressions<br>Flat base<br>Collared/braced rims<br>Dentate stamping |

As well, Byrne's (ibid.:271) partial sequence modes which are present in only two of the three periods have some chronological value. That is, certain of the ceramic attributes should not be present in samples drawn from certain periods. Thus, plain fabric/net impressions, ridged lips(?), and alternate lip impressions(?) should be absent from Period III samples, while surface finish truncation, shoulders and shoulder decoration, incised/impressed decoration, and thickened lips should be absent from Period I samples. These negative associations, as well as changes in persistent mode frequency, are, of course, only useful in classifying large samples.

Differences in persistent mode frequency between the Morkin site and ceramic samples from other sites led Byrne (ibid.:331ff) to conclude that two ceramic traditions were present in southern Alberta. Using the Cluny site sample (Forbis 1977), a clearly intrusive cultural complex, as a control, Byrne reclassified the ceramics into the Saskatchewan Basin

Complex and the Cluny Complex. Differences in surface finish, vessel form and decoration were evident. Bower (1973) undertook a petrographic analysis which indicated that microline was infrequent in the temper of Cluny Complex vessels, thus confirming the classification (Byrne 1973:339). The Cluny Complex ceramics are confined to Period III and appear related to the Middle Missouri area, whereas the Saskatchewan Basin Complex represents an indigenous ceramic tradition. These complexes are discussed further below.

THE AVONLEA PHASE

The Avonlea Phase, dating ca. 1750 to 1150 years B.P., is coeval with Besant on the Alberta Plains. While Besant contains a variety of point sizes interpreted as both atlatl dart and arrow points, Avonlea points are apparently all arrow tips. Kehoe (1966b, 1973:50ff) has defined a number of varieties of the Avonlea point type, but only Avonlea Triangular, Timber Ridge Side Notched, and Head-Smashed-In Corner Notched (Reeves 1983a:102) are commonly recognized in Alberta. The last-named look rather like small Pelican Lake points and occur in early Avonlea components (ibid.:102). This suggests to Reeves (ibid.:164) that Avonlea arrow points derive from Pelican Lake dart points, and that the two phases are serial complexes of the TUNAXA Tradition. It should be noted, however, that Reeves (ibid.:18) is now less certain of this derivation.

Avonlea
(Timber Ridge)

Head-Smashed-In
Corner Notched

Ceramics are often present in Avonlea components. For Alberta, Byrne (1973:355) describes these as simple globular vessels with plain fabric/net impressed surface finish, unthickened flat or ridged lips, and decorated with bands of punctates below the lip; lip decoration occasionally occurs. Byrne classifies these as the Saskatchewan Basin Complex Early Variant. Dyck (1983:123) finds Avonlea ceramics from Saskatchewan to be conoidal and notes several distinctive types: net impressed, spiral channelled, and smoothed versions of both.

The spiral channelled variety is thought to represent generally larger vessels than the net impressed ones.

Avonlea sites are relatively rare in Alberta; a search of the site files and reports indicates that about three times as many Besant and Old Women's Phase sites are known (Figure 3). Dyck (ibid.) notes a similar situation in Saskatchewan. Since all three phases are relatively recent, this situation is unlikely to be a result of sampling error. Since the Avonlea site types indicate an adaptation to the Plains at least as sophisticated as Besant, it seems unlikely that any sort of "fitness" (adaptive advantage) mechanism is responsible.

In Alberta, a number of Avonlea sites have been excavated but, unfortunately, several have not yet been reported in detail (Figure 16). Several Avonlea components occur at the Hartell Creek site (Murray, Smith and Reeves 1976) in association with Besant Phase and Old Women's Phase material; these levels are interpreted as winter-spring campsites and are similar to the Besant components previously described. A stratified campsite on Nose Creek north of Calgary, EhPm-34, is currently being analysed (see Head 1985). While previous investigations at the site indicated some of the stratigraphic complexity (Maltin and Van Dyke 1979; Loveseth 1982), recent investigations indicate multiple Avonlea Phase and Old Women's Phase occupations. An Avonlea tipi ring site on the Red Deer River, EfOo-130, yielded about 4,000 lithic, bone and ceramic artifacts but remains unanalyzed (Reeves 1977). The Morkin site, DlPk-2, a major stratified campsite in southwestern Alberta, is briefly described by Byrne (1973) along with other ceramic bearing sites. Completion of the analysis and reporting of these sites will undoubtedly contribute greatly to our understanding of the Avonlea occupation of Alberta. Contrary to Dyck's note (1983:123), Avonlea is not represented at Old Women's buffalo jump (Forbis 1962), but is present at Head-Smashed-In (Reeves 1978b).

## The Ramillies Site (EcOr-35)

Perhaps the most unusual Avonlea site yet reported from Alberta is the Ramillies pound (Brumley 1976), located north of Medicine Hat. The site exhibits drive lines across rolling prairie to a small depression on the edge of a large glacial outwash channel. Trenching of the depression revealed an earthen, rock-capped wall separating the depression basin

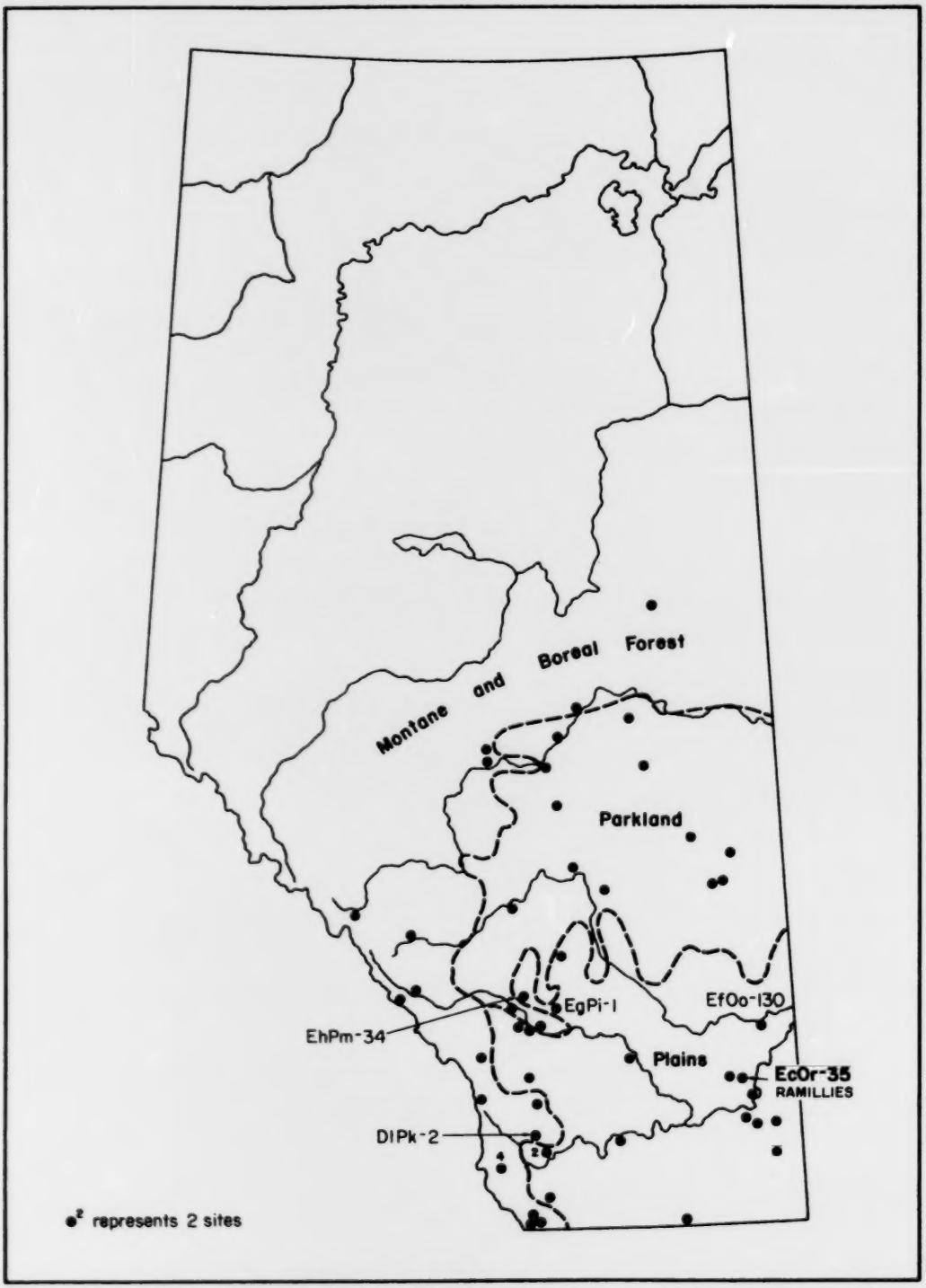



Figure 16. Distribution of Avonlea Phase sites in Alberta (vegetation zones illustrated are modern).

from the coulee escarpment. The earthen core of the wall consists of clay with some large rocks and bison bone fragments. Atop this core is a stone cap; some of the stones had tumbled back into the depression, but the majority were in place on the crest of the core. The rocks are large, as much as 1 m long, and weighing perhaps 200 kg. The wall reaches 2.2 m above the basin floor and may have stood higher. The construction was about 10 m long; the natural sloping sides of the depression form the rest of the containment area. Only a small amount of bone and cultural material was recovered from the depression, whereas testing on the slope of the coulee yielded much butchered bone, projectile points, and bone tools. Although only one of 12 points from the basin is Avonlea, 24 of 38 points from the coulee slope are Avonlea; the other points are all Late Side Notched varieties.

Brumley (ibid.:23) interprets the site as a bison pound used in summer/fall. As no wood is available in the area, it appears that a natural depression was closed off on the downslope end by the earth and rock wall to form the pound. Continued use of the small pound, and the labour investment in its construction, necessitated periodic cleaning. The materials removed, mostly bone and projectile points, were simply thrown over the wall to form the deposits on the coulee slope. Surely the Ramillies pound indicates that the Avonlea hunters were as sophisticated as those of the Besant Phase.

Comments: Avonlea Phase

As noted earlier, Reeves (1983a) views Avonlea as a sequential phase within the TUNAXA Tradition. Its development from Pelican Lake is thought to result from the diffusion of the bow and arrow from interior British Columbia and ceramics from the east. Both Byrne (1973:459) and Adams (1977:139) agree with this derivation and join Reeves in rejecting the Kehoes' (Kehoe and Kehoe 1968:30) argument that Avonlea represents Athapaskans moving south. Dyck (1983:125) echos this view, albeit with reservation. It should be noted that, in the foreword update to his recently published dissertation, Reeves (1983a:18) is rather less positive about Pelican Lake-Avonlea relationships. Morgan (1979:209), on the basis of ceramics recovered from the Garratt site in Saskatchewan, suggests that Avonlea represents an actual population movement from the

upper Mississippi Valley. It seems safe to say that the consensus of opinion favours Reeves' (1983a) origin hypothesis but, like Besant, the origins of Avonlea, and its assignment to the TUNAXA cultural tradition, should not be taken as proven.

The co-occupation of the Alberta Plains by Avonlea and Besant leads Reeves to speculate that superior social integration enabled Besant to expand westward in the face of Avonlea's (presumably) superior weapon system. This dominance was thought to be short-lived, followed by coexistence on the Plains leading to Besant people gradually adopting the bow and arrow (ibid.:192). Given Avonlea's emphasis on local lithics (e.g., Dyck 1983:123; Reeves 1983a:19; cf. Morgan 1979:212) compared to Besant's occasionally extensive use of exotics, especially Knife River Flint, Reeves' (1983a:190ff) contention that Besant communication systems were "superior" may have some virtue. If there was less contact among Avonlea peoples, this might have led to more rapid style changes among some isolated local bands. Considering Kehoe's (1973:50) Avonlea variants, and Byrne's (1973:468) contention that early Side Notched Arrow (Old Women's Phase) points are most similar to Avonlea points, it may be that some Avonlea bands were rapidly changing their point styles. Unfortunately, the early stylistic investigations of Forbis (1962) and Kehoe (1973) are often ignored, and post-Avonlea point variation is badly obscured by the gross typological categories commonly used.

Byrne (1973:467) interprets Reeves' model to indicate that Besant develops into the Old Women's Phase, ultimately displacing Avonlea from the Plains. Byrne (ibid.:468) rejects this idea, noting that the Late Plains Side Notched points are more similar to Avonlea than Samantha points, and that one would have to derive the ceramic Old Women's Phase from the, in his view, aceramic Besant Phase. Thus, Byrne (ibid.:470) suggests that either Avonlea, or a merger of Avonlea and Besant, form the basis for Old Women's Phase origins. Why such a merger of traditions would occur after so many years of identity maintenance, is not known. However, Duke suggests the following scenario:

> The Avonlea Phase was the indigenous phase in the study area about two thousand years ago. The raising of the carrying capacity, as a result of the increased precipitation levels of the sub-Atlantic, allowed the expansion into the area of Besant Phase hunters who were ultimately linked in trading networks to

> communities on the periphery of the Northeastern Plains. As trophic levels dropped during the ensuing Scandic Period, there is evidence for increasing amalgamation of the Besant and Avonlea Phases, finally resulting in the emergence of the Old Women's Phase (Duke 1981:163).

I admit to having difficulty understanding why carrying capacity would lead to culture-amalgamation (see Dewar 1984).

## THE OLD WOMEN'S PHASE

The post-Avonlea, Late Prehistoric complex in Alberta is designated the Old Women's Phase, after the buffalo jump of the same name (Forbis 1962; Reeves 1969). I should note that it is now common to see the incorrect singular form, Old Woman's; the two have become synonymous. In Saskatchewan, Dyck (1983:126) refers to the period simply as "The Late Side-Notched Series," although a number of cultural complexes within the period in both Saskatchewan (Dyck 1983; Meyer 1983b) and Manitoba (Syms 1977) are defined primarily on the basis of ceramic variation. These complexes are often ascribed to (historic) Cree, and are of less significance to Alberta Plains archaeology.

Prairie Side Notched

Plains Side Notched

A variety of names are applied to the projectile points from this time. Commonly, these include Side Notched Arrow, Late Side Notched, (Late) Plains Side Notched, and Prairie Side Notched, with or without hyphens. While Kehoe's (1966b, 1973) general typological division into Prairie (1200-700 years B.P.) and Plains Side Notched (550-225 years B.P.) had cultural and chronological implications, these terms are often now simply used as synonyms (Dyck 1983:129). The initiation of the Old Women's Phase is usually noted as occurring about 1400 years B.P. (Reeves 1978a), although the earliest radiocarbon dates for the phase overlap both Avonlea and Besant dates (see Brumley and Rushworth 1983; Vickers 1983). The type site for the phase is described below (Figure 17).

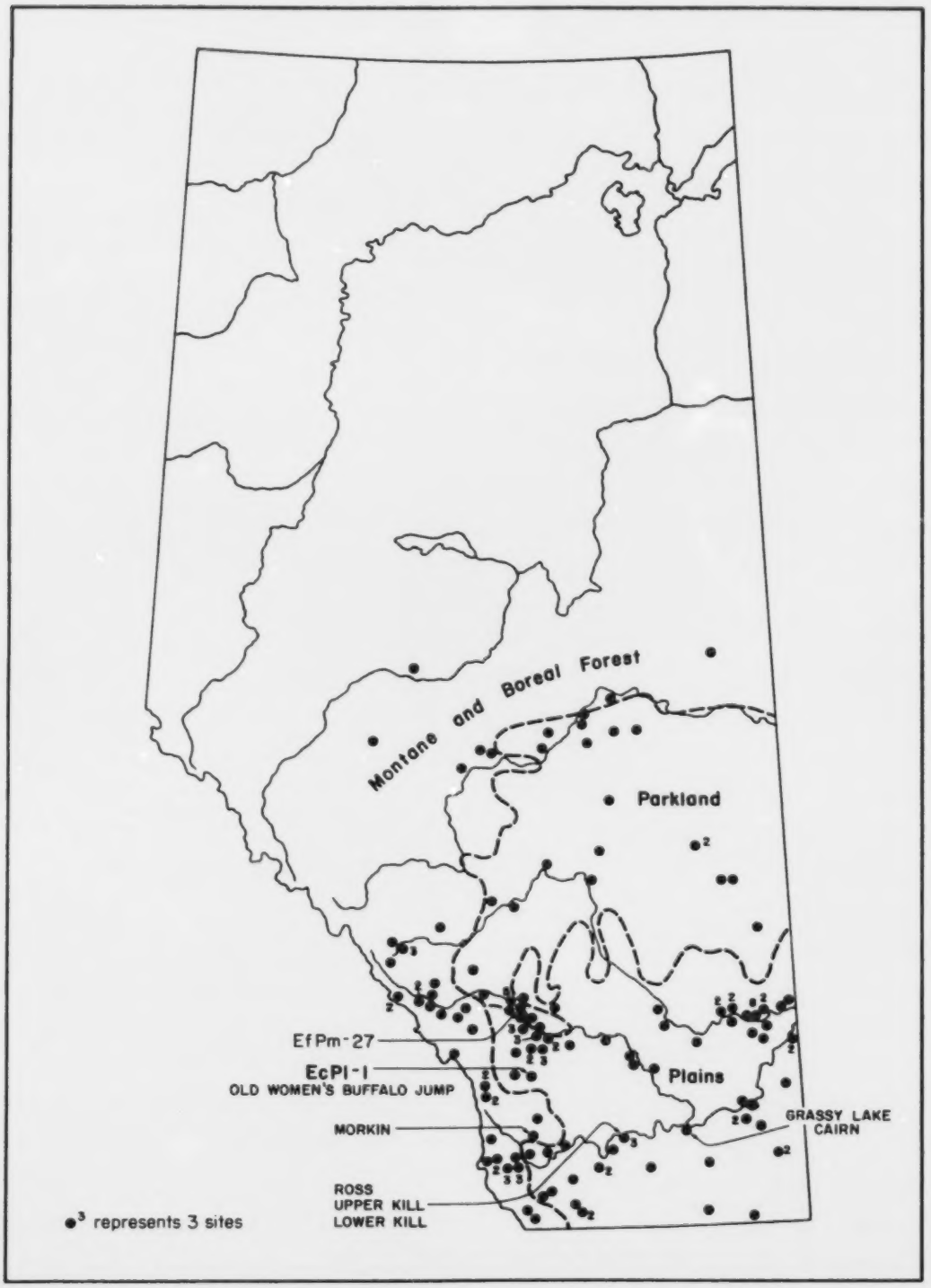



Figure 17. Distribution of Old Women's Phase sites in Alberta (vegetation zones illustrated are modern).

The Old Women's Buffalo Jump (EcPl-1)

The Old Women's buffalo jump, located on the edge of Squaw Coulee about 90 km south of Calgary, was excavated in the late 1950s (Forbis 1962; Wormington and Forbis 1965:130). It is the only well reported jump investigated in Alberta. It is also one of the few archaeological sites which is identified in Blackfoot mythology. It was to the Women's Buffalo Jump that Napi brought the men and instituted the custom of cohabitation of the sexes (Forbis 1962:61). However, it is for the typological studies of Late Prehistoric projectile points that the jump investigation is best known among archaeologists.

Two major units were excavated in the slope below the jump-off, the Upper Pit and the Lower Pit. The former had the best stratigraphic separation in deposits about 7 m deep. Cultural layers 1-14 which contain small side notched points of the Late Prehistoric constitute the Upper Member. Cultural layers 15-29 form the Lower Member and contain primarily Besant and Pelican Lake points of the Middle Prehistoric Period. The discussion presented here will concentrate on the point typology from the Upper Pit, Upper Member.

Forbis (ibid.:85ff) began his investigation of the points by securing a number of measurements which were subsequently reduced to a limited set which he considered chronologically useful. As well, a series of indices were developed to explore attribute covariation. Once attributes had proved to be chronologically useful, a point typology was devised. Acceptance of the trial types was based upon satisfactory seriation curves (ibid.:94).

In its simultaneous consideration of several attribute indices, Forbis' typology is not particularly elegant; the typology is paradigmatic rather than hierarchical. In a later publication (Forbis 1977:52), he attempts to clarify the typology and, in my opinion, fails. However, the original type descriptions are really quite clear, and can be readily used as long as the significant attributes are all considered. The typology can be represented as follows:

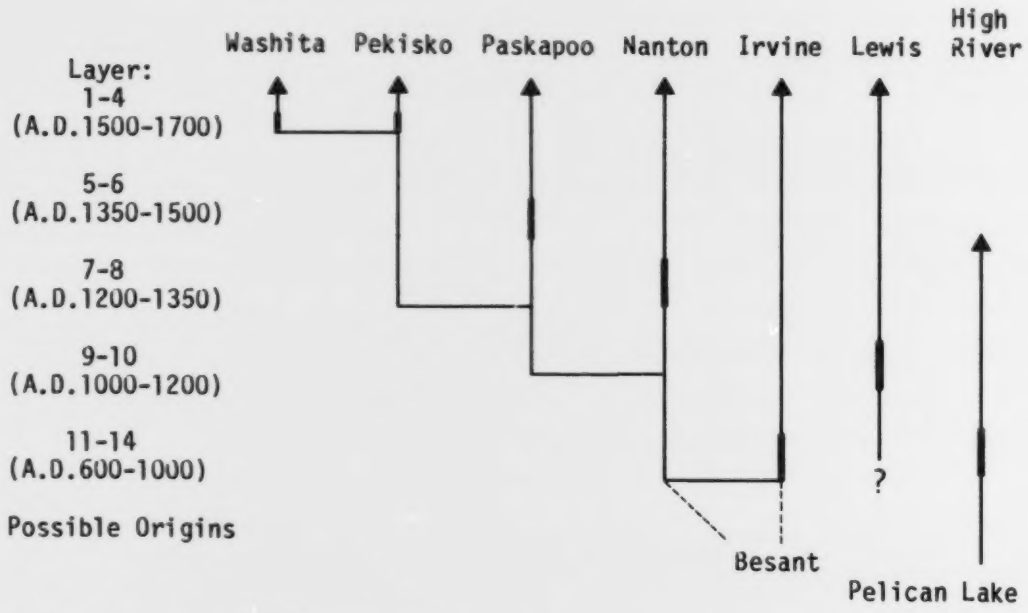
| Type | Width | Height | Special |
|---|---|---|---|
| Washita | $A > B$ | $C \geqq D$ | flaring basal edges |
| Pekisko | $A > B$ | $C > D$ | contracting base |
| Paskapoo | $A = B$ | $C > D$ | |
| Nanton | $A \geqq B$ | $C \leqq D$ | |
| Lewis | $A < B$ | $C < D$ | rounded basal edge |
| Irvine | $A < B$ | not specified | angled basal edge |
| High River | $A < B$ | no basal edge | corner notched |

Where:

A = Maximum width of base
B = Maximum width of body (blade)
C = Height of basal edge
D = Height of notch opening (Forbis' [1962:86] notch width)
A = B when the difference is less than 1 mm.

As long as a point is keyed to all the listed attributes, correct classification is likely. For example, a Nanton point of the configuration A>B, C = D and a Washita point of the configuration A>B, C = D can be differentiated by examining the base morphology (base flares outward = Washita, any other = Nanton). The utility of the typology is a function of its ability to correctly seriate as demonstrated at the Old Women's Jump and at a number of other sites including the Ross (DlPd-3, Forbis 1960:127; 1962:105); Upper Kill, Lower Kill, Grassy Lake Cairn (DlPd-1, DlPd-2, DfOv-1, respectively; Forbis 1960:127); EfPm-27 (Crowe-Swords and Hanna 1980:25) and Saamis sites (EaOq-7, Milne Brumley 1978:151).

Throughout his report, Forbis (1962) suggests possible developmental linkages for the point types. These, and the relative chronology of the types, can be illustrated as follows:




The heavy lines on the illustration indicate the layers with greatest relative frequencies of the point types; the dates listed are estimates. While Forbis (ibid.:102) suggests that High River points derive from Pelican Lake, I have also indicated a Nanton/Irvine-Besant linkage. This is based partly on the presence of Nanton points in association with Besant in the Lower Member and partly on Reeves' discussion of the Besant arrow point type called Samantha Side Notched:

> Samantha Side Notched (Kehoe and Kehoe 1968) points seem to have the same range of nonmetric formal variation as Besant Side Notched, but metrically, it is significantly smaller. ...The form is also very similar to Forbis' "Irvine" type ... and also certain Nanton forms (Reeves 1983a:63).

Reeves (ibid.) goes so far as to reclassify two of the Irvine types from Old Women's Jump as Samantha.

DISCUSSION: LATE PREHISTORIC PERIOD

Adams sees great continuity between Avonlea and Old Women's, noting "... Avonlea either outlasted or assimilated the Besant phase and ... The Tuxana [sic.] tradition was responsible for the development and proliferation of the Old Woman's Phase" (1977:142). Byrne similarly notes "... the Side Notched Arrow points of the Old Women's phase were probably an outgrowth of the Avonlea projectile points rather than Besant

or Samantha points" (1973:469). However, with the apparent similarity of Irvine, Nanton and Samantha discussed previously, and Forbis' (1962) linkage of the later point types to Irvine/Nanton, one could surely argue that the small side notched points derive from the Besant-Samantha line. Alternatively, one could combine the arguments and suggest that the Prairie Side notched group (Nanton, Irvine, Lewis, High River[?]) derives from Besant-Samantha, and the Plains Side notched group (Washita, Pekisko, Paskapoo) derives from Avonlea. This would not be inconsistent with the radiocarbon date overlap for the three phases (see Vickers 1983). Indeed, Reeves (1983a:18ff) appears to do this in a complex scenario wherein the "early" Old Women's Phase derived from Besant develops into a "late" Old Women's Phase influenced by (or derived from?) Avonlea, and Avonlea leads directly to the Tobacco Plains Phase in the mountains.

> In sum, the "model" suggests that Avonlea (mountain variant) is directly technologically ancestral to the Tobacco Plains (Prehistoric Kootenai) and is strongly linked technologically to a "late" Old Woman's (North Peigan?) variant, characteristic of the Alberta Plains, antecedents to which lie in "early" Old Woman's (Blackfoot) and Besant traditions within the northwestern Plains region (Reeves 1983a:20).

Reeves' early and late Old Women's Phase variants correlate with the transition from Prairie to Plains Side Notched types of Kehoe (1966b).

The ceramic component of the Old Women's Phase in Alberta has been exhaustively examined by Byrne (1973). He argues for a developmental linkage between Avonlea and Old Women's ceramics. However, as noted earlier, the low frequency of transitory modes of Period I (Avonlea) in Period II (Old Women's) may be the result of mixing. As well, Morgan (1979:390) cogently argues that the frequency variation of the cord impressed exterior persistent mode reflects mixing between the upper and lower levels at the Morkin site. She concludes that: "There is no evidence to suggest that the Avonlea and side-notched ceramics [sic] ... represent a single cultural development" (ibid.:391).

Byrne (ibid.:437) also considers the Late Variant to reflect strong east-west cultural connection, hence the term "Saskatchewan Basin Complex." He (ibid.:486) further contends that the ceramic affiliations with the Missouri drainage are minimal, an idea attacked by Keyser (1980,

1981; see also Byrne 1980). Byrne's contention that the Missouri Coteau impeded communication between the Missouri and Saskatchewan basins in pedestrian days is challenged by lithic distribution patterns (see Reeves 1983a:9). However, if the Coteau served as summer bison range (Morgan 1979; Gordon 1979), and if ceramics were not commonly carried in the highly mobile summer hunting season, this might have acted as a filter barrier to the diffusion of ceramic traits. It is unfortunate that ceramics are relatively rare in Alberta Plains sites, since ceramic distribution data would be useful in examining the problem of ethnicity of the Old Women's Phase.

The problem of ethnic identification in the Late Prehistoric Period is an old one (for a review, see Byrne 1973:495-531; Greaves 1982). In addition to equating Avonlea with Athapaskans, Kehoe (1973:77) linked Prairie points with Algonkians and Plains points with a northwestward thrust of Mississipians. Dyck (1983:129) also sees links with the east in these projectile points, although one could surely argue just as convincingly for similarity to Desert Side-Notched in the Great Basin (see Heizer and Hester 1978:163). Ceramics have been useful in identifying prehistoric Cree in Saskatchewan (see Meyer 1983b) and Manitoba (see Syms 1977:141). Keyser (1977) suggests that prehistoric Shoshoni distribution can be equated with specific rock-art motifs. Greaves (1982) has attempted to differentiate Blackfoot, Shoshoni, Crow and Kutenai on the basis of variation in projectile point metrics; the study needs to be expanded and replicated. Brumley (1985) suggests that the distribution of a death lodge type of medicine wheel (see Dempsey 1956; Archaeological Society of Alberta-Lethbridge Centre 1971) may indicate prehistoric Blackfoot distribution. Reeves believes:

> The Old Woman's Phase ..., while representing the prehistoric Blackfoot/Gros Ventre, can be regionally and temporally segregated into variants which represent the various "tribal" constituents - North Peigan, Blood, Atsina and Gros Ventre, for example (1983a:20).

I am doubtful that the Old Women's Phase can as yet even be adequately segregated from similar Late Prehistoric complexes in the surrounding regions. Until this task is undertaken, it seems unlikely that "tribal" units could be defined within the phase. While most local archaeologists

would probably not dispute a Blackfoot-Old Women's Phase correlation (cf. McCullough 1982:41ff), demonstration of that correlation has remained frustratingly elusive.

## PROTOHISTORIC PERIOD

The Protohistoric Period begins about 250 years ago and terminates with the coming of the North West Mounted Police in A.D. 1874. It starts with the acquisition of the horse, about A.D. 1730-1740, continues with the acquisition of increasing quantities of European goods, and constitutes the florescence of the Plains Indian culture described by ethnologists. The early part of this period, ca. A.D. 1700-1800, is poorly known from historical sources, but European observation increases after that period. Indeed, Forbis (personal communication 1986) suggests terminating the Protohistoric at A.D. 1800, since direct historical reference to the area and its people begins about that time. Two phases are defined for the period: a continuation, at least initially, of the Old Women's Phase, and the One Gun Phase. Relatively few sites are known from the Protohistoric Period (Figures 3, 18).

### THE OLD WOMEN'S PHASE

The Protohistoric Period sees a basic continuity of the Old Women's Phase in Alberta; as Byrne notes: "For this phase probably the greatest single change is that items of European manufacture have been added to the material inventory, reflecting the first contacts with encroaching civilization" (1973:503). The very few sites yet known from the period are documented primarily by rare trade beads or metal points in artifact assemblages typical of the Late Prehistoric (see, for example, Milne Brumley 1978). Unfortunately, so little is known about the archaeology of the Protohistoric that no meaningful discussion is possible. The impact of the horse, which surely produced major changes in the settlement pattern, cannot yet be documented; furthermore, our lack of a protohistoric data base has inhibited the application of the Direct Historical Approach (Forbis 1963). As yet, little can be added to Byrne's (1973:515ff) consideration of the problem. Brink (1986b) amply demonstrates the difficulty of defining tribal distributions at the time of European contact.

#### The Saamis Site (EaOq-7)

The Saamis site is a Protohistoric Old Women's Phase campsite located in Medicine Hat (Milne Brumley 1978). The site is situated in the deeply

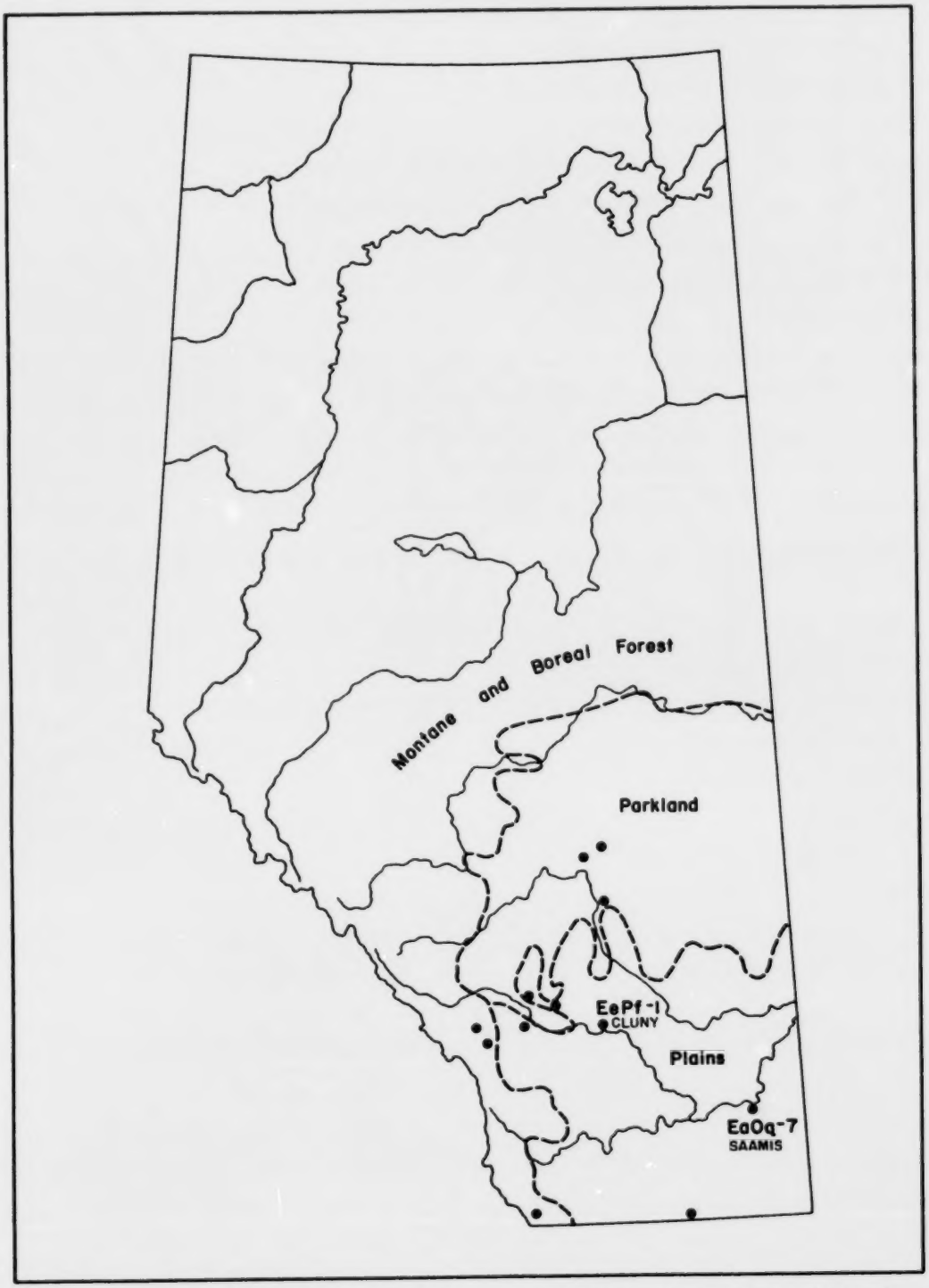



Figure 18. Distribution of Protohistoric Old Women's Phase and One Gun Phase sites in Alberta (vegetation zones illustrated are modern).

incised, wooded valley of Seven Persons Creek, a few kilometres from its confluence with the South Saskatchewan River. Cultural material is present within two terraces, one about 3 m and the other 2 m above the creek.

In the upper terrace, the main cultural level is situated about 20 cm below surface, although this varies depending on the vagaries of alluvial deposition. In some areas, cultural material was noted at 0-10 cm below surface; this material merges with the main cultural level when the latter approaches the surface. It is unclear whether the upper layer is a separate occupation or is the result of recent disturbance at the site (ibid.:27). A radiocarbon date of 210±80 years B.P. (S-827, ibid.:147) was obtained.

On the lower terrace, cultural material was discovered at about 75 cm below surface and a date of 435±125 years B.P. (S-824, ibid.) is accepted. Milne Brumley (ibid.:32, 35) interprets the radiocarbon dates, together with the absence of trade goods from the lower terrace component, as evidence of two occupations. However, the dates cited above overlap at two standard deviations, and the components are functionally complementary. That is, the lower terrace component is a bison processing area, whereas the upper terrace component is a habitation area. One could thus argue that the components represent functionally discrete activity areas of a single occupation.

The campsite component, except for a few trade goods, is little different from Late Prehistoric terrace campsites such as the Ross site (Forbis 1960). Features are numerous and include unprepared hearths, basin-shaped prepared hearths containing bone, fire broken rock and ash, fire broken rock concentrations, bone clusters, and so forth. Artifacts include projectile points, end scrapers, perforators, bifaces, ceramics, and beads of bone, shell and ground stone as well as various debitage categories. Bead manufacture, both from bone and a local red shale, occurred on-site. The faunal assemblage is diverse - deer, antelope, black bear, wolf, fox, hare, golden eagle are present - but is dominated by bison. Foetal elements and the site locale indicate a winter-spring occupation.

Using the projectile point typology developed by Forbis (1962), Milne Brumley (1978:33) was able to demonstrate great similarity to the upper

levels at Old Women's Buffalo Jump estimated to date ca. A.D. 1600-1700. Although most of the ceramics are classified as Saskatchewan Basin Complex Late Variant, some Cluny Complex material is present. Check stamped sherds, and surface finish trunction indicate the sample should be assigned to Byrne's (1973) Period III, the Protohistoric. Trade goods include a single metal projectile point, a large faceted black glass bead, and four 3-4 mm diameter glass beads in blue or white. Although only one bead was in situ in level 1, it is reasonable to suggest all were associated with the main occupation.

In summary, the Saamis site is an Old Women's Phase occupation dating to the Protohistoric Period. Since no horse bones were recovered and few trade goods were present, the site was probably occupied early in the period, perhaps about A.D. 1700-1725. Most importantly, the Saamis site indicates a basic continuity between the Late Prehistoric and Protohistoric Old Women's Phase.

ONE GUN PHASE

The One Gun Phase was defined by Byrne (1973). This phase is represented by Cluny Complex pottery, rectangular bison scapula knives, pitted flat stones ("nutstones"), and a bell-shaped cache (?) pit at the Morkin site (Byrne 1973:476). The diagnostic ceramics are known from the South Saskatchewan Basin and are apparently absent from both the Milk and North Saskatchewan basins. Byrne (1973:503) suggests an early Protohistoric date of A.D. 1720 to A.D. 1750 for the phase in Alberta.

Cluny Complex potsherds (ibid.:335ff) represent round-base, globular vessels. Shoulders are absent or subdued, while necks are either short and sharply curved or long and slightly flared. Rims are braced and S-shaped or vertical. Lips are usually flat, unthickened and in-sloping. The most common decorative techniques are linear dentate stamping and cord wrapped object impression, but fine line incision and shallow punctation occur. Decoration is applied to the upper lip surface or on the rim below; decoration at the lip-rim juncture is rare. Motifs are usually complex and oriented in multiple horizontal rows along the rim. Triangular and chevron patterns also occur (see Byrne 1973:691, 692; Forbis 1977:38 for illustrations).

The Cluny Site (EePf-1)

The Cluny site, located at Blackfoot Crossing on the Bow River east of Calgary, is a fortified earthlodge village (see Byrne 1973:471ff; Forbis 1977; Wormington and Forbis 1965:146). The site is enclosed by a roughly semi-circular ditch which terminates at the terrace edge; the latter drops about 3 m onto the modern floodplain. Presumably, the Bow River, or a tributary thereof, flowed along that side of the site at the time of occupation (Forbis 1977:25). The ditch is about 250 m long, 2.5 m wide, and 1 m deep, and is bridged by at least three causeways. About 4 to 8 m inside and parallel to the ditch was a palisade constructed of poplar posts emplaced in a shallow footer trench. Forbis (ibid.:34) suggests that the palisade sloped inwards and was braced from the interior. Between the ditch and palisade are 11 large pits; the palisade segments extend to the rear (interior) of the pits and are interrupted by them. As Forbis (ibid.:36) notes, it would be rather unusual to situate a pithouse between the ditch and palisade unless it was to serve as part of the fortification system. Unfortunately, there was little in the way of structural evidence or artifacts which would indicate the function of the pits. Most of the prehistoric cultural material was recovered from within the palisaded area rather than from the pit features.

Over 1,000 pot sherds from at least 24 Cluny Complex vessels and 10 clay gaming discs were recovered. The projectile points were classifiable into the Old Women's buffalo jump typology (Forbis 1962) and seriate properly into the system developed at that site. A variety of other tools were recovered and, except for a noticeable lack of end scrapers, the chipped stone assemblage is not particularly different from any other Alberta Plains site of this period. Most of the lithics are locally available except for minimal amounts of obsidian and, possibly, Knife River Flint. The latter is not well represented and does not suggest any close interaction with the Middle Missouri area in this respect. A variety of shell (local river clam) and bone beads were recovered. Faunal remains are dominated by bison, although horse, dog, kit fox, elk, deer, antelope (?), and duck (?) were minimally present. Two fragments of brass or copper thought to represent knives, and the horse bones, constitute the only evidence of post-contact European influence.

Comments: One Gun Phase

The Cluny site is clearly unlike any other site known in southern Alberta; it is obviously related to the Plains Village Pattern of the Middle Missouri area (Forbis 1977:72; Lehmer 1971). Byrne (1973:471ff) considers the Cluny site to be an example of site-unit intrusion and to represent an actual migration of people. To summarize Byrne's detailed consideration of the problem, the following points seem important:

1. The Cluny site and its ceramic assemblage are clearly anomalous vis-a-vis the indigenous Old Women's Phase and its ceramic assemblage.

2. When found in dateable contexts, the Cluny Complex ceramics are all contemporary and assignable to the Protohistoric Period.

3. The material is obviously related to archaeological material from the Middle Missouri area, and intermediate sites in Saskatchewan are known.

4. The ethnographic analogue of the Hidatsa/Crow fission provides a model for the Cluny event.

5. Epidemics of European disease and conflict with groups displaced by European expansion in the east, provide reasonable, although unproven, mechanisms to stimulate such a migration.

There remain two unresolved problems with the One Gun Phase intrusion. First, no specific Middle Missouri cultural unit is identical to the One Gun Phase and the Cluny Complex pottery is only generally similar to that of the contemporary Post Contact Coalescent subtradition in that region. The site-unit intrusion argument is weakened by the absence of a known source cultural unit in the Middle Missouri area. Second, no ethnographic remnants of the One Gun Phase peoples were observed when Europeans penetrated southern Alberta. However, the Cluny site was occupied only briefly, perhaps for less than one year, in the period A.D. 1730-1750 (Forbis 1977:74). Since Alberta is outside the region of dependable corn agriculture, and since the horse and gun would have made bison hunting a viable and exciting alternative economic pursuit, the rapid abandonment of an ill-adapted lifeway is not surprising. Perhaps the distribution of Cluny Complex ceramics in other South Saskatchewan Basin sites indicates the dispersal and ultimate absorption of the One Gun migrants into the resident hunting cultures of southern Alberta.

## SUMMARY AND CONCLUSIONS

In reviewing Alberta Plains prehistory, I have examined the provincial record within the context of culture history reconstruction. My objective has not been a new synthesis so much as a critical review of our current reconstructions. In part, I chose this approach in reaction to the sterile prehistory overviews which are so prevalent in Cultural Resource Management reports. The latter, produced in great numbers by Alberta archaeologists, tend to put forward a problemless, virtually mythological view of prehistory. By indicating data gaps, and juxtaposing alternative reconstructions, I hope to have shown areas where provincial research might be fruitfully directed. In this section, I shall summarize and discuss some of these observations.

The basic classificatory scheme used in Alberta, derived from Mulloy (1958) and modified by Reeves (1969, 1973a, 1978a, 1983a, 1983b), is a very awkward construct. The use of projectile point horizon styles to define the periods results in classificatory confusion in transitional cultural complexes (see Reeves 1985). For example, a Besant Phase component might contain: 1) atlatl dart points, 2) arrow points, or 3) both dart and arrow points. It would then be assigned to the Late Middle Prehistoric, Late Prehistoric, or both periods, respectively. While Reeves (ibid.) states that the Besant Phase is assigned to the Late Middle Prehistoric-Late Prehistoric transition, no such transition period is defined in the literature. For the component containing both dart and arrow points, assignment to the particular period in the Mulloy-Reeves system must remain an arbitrary decision. I conclude that the taxonomic rigor argued for by Reeves (1985) does not really exist in the system, and that terminological simplicity may be a more reasonable goal.

Before closing this discussion of systematics, I should note that Wormington and Forbis' (1965:13) prediction that use of Mulloy's (1958) system would lead to confusing terminology has been fully realized. I suspect Frison's (1978) system is popular simply because it removes terms such as Early Middle and Late Middle Prehistoric from the vocabulary of Plains archaeology. I assume Reeves' (1973a:1231) introduction of an Early Middle Prehistoric I and II, followed by a Late Middle Prehistoric Period, reflects a realization that the logical Middle Middle Prehistoric

would have been greeted with snickers or loud guffaws. In keeping with archaeological tradition, we should simply use the terms Middle Prehistoric I, II, and III and drop the adjectival modifier entirely. In any event, I quite agree with Reeves' (1985) conclusion that a congress on nomenclature would be useful.

Turning to more substantial issues, some comments on glacial geology and paleoecology seem warranted. As this review has shown, the maximum Late Wisconsin ice extent, the chronology of deglaciation and of the formation and drainage of proglacial lakes in southern Alberta are essentially unknown. Similarly, the paleoecology of the region is extrapolated from surrounding areas; there are no direct data for the period from the time of deglaciation to a pollen core basal date of 3240±150 years B.P. (Tx 2918, Kroker 1979:49). Any research to fill this void should be encouraged by the archaeological community. The current situation in which paleoenvironments are projected by logical argument from global climatic models, historic droughts and so forth, is simply not adequate to meet the needs of culture history.

This situation is not unique to the environmental sciences; we also have a singularly uninspiring data base for the Early Prehistoric Period. It is disheartening to realize that the only Early Prehistoric Period site of any consequence known from the Alberta Plains is the Fletcher site, discovered over twenty years ago (Forbis 1968b). In essence, about one half of the potential cultural sequence in southern Alberta is void of substantive data, and no comprehensive reconstruction of early culture history is yet possible.

It is evident that southern Alberta was occupied by Paleo-Indians, since surface finds of appropriate diagnostic points are known. It is reasonable to assume that Fletcher is not the only buried Early Prehistoric site in the province. Wilson's (1983) systematic consideration of archaeological visibility, as well as recent successes at discovering sites dating as far back as the Early Prehistoric-Middle Prehistoric transition (e.g., Doll 1982; Van Dyke and Stewart 1984), suggest that we will overcome our site discovery problems. Systematic investigation of select depositional environments should, at the very least, help us to better understand where we might expect to encounter early sites. Clearly, the search for both archaeological and

environmental data pertaining to the early occupation of the Alberta Plains should be a research priority.

The Middle Prehistoric Period is much better known in Alberta. Sites of the Early Middle Prehistoric I period are rare, but are being discovered in increasing frequency. This is probably due to greater understanding of the depositional factors and the better site discovery techniques, as well as recognition of cultural diagnostics. However, the latter hint at a complexity not yet understood; typological studies such as that of Walker (1980) need to be pursued. This is especially important given the general morphological similarity of some early notched specimens to both Besant and Pelican Lake points.

From the Early Middle Prehistoric II to the Late Prehistoric periods, the data base from the Alberta Plains is generally substantial. It should be noted, however, that the site sample is biased towards specific regions of the province. The Medicine Hat and Calgary areas, the grassland enclaves in the Crowsnest Pass and the Pass Creek valley, have been intensively examined. Other areas are far less well explored. The Milk River area represents a major data gap in the critical zone of southern Alberta where influences from the Missouri drainage system might be expected. Here and elsewhere, there is need of research oriented survey and settlement studies.

As well as sporadic regional coverage, certain site types require further investigation. Except for Head-Smashed-In (Reeves 1978b) and Old Women's (Forbis 1962), bone beds at major bison jumps in Alberta have not been excavated. In the United States, kill site research has become very sophisticated (e.g., Reher and Frison 1980), and there is need to apply modern techniques to similar sites in the province. As well as the zooarchaeological aspects, clarification of the relative chronology of Sandy Creek, Besant and Pelican Lake is needed.

Also of great importance is research directed towards better determination of seasonality. Much is now based on inference from site location. The only seasonal indicators in common use are foetal bone presence or absence, and bison tooth eruption and wear patterns. The latter are projected from Wyoming data and may not be directly comparable to Alberta. Any research which will give us tighter seasonal control will be a major contribution.

Our most critical problem in the reconstruction of culture history centres around the ethnicity concept. As has been amply demonstrated in this review, there is a tendency to equate specific projectile point types with specific ethnic units. The identity of the ethnic units is often undefined, although both linguistic and ethnographic groups are sometimes specified. While specific projectile point types could be diagnostic of particular tribes or bands (see Wiessner 1983), other alternatives must be considered (see Reher and Frison 1980:94ff). Assuming style is an attribute of most items of the lithic assemblage (Sackett 1982), a polythetic approach (Clarke 1968) would certainly be preferable to our current focus on projectile points. As far as I am aware, Reeves' (1983a) admirable systems approach to the analysis of Pelican Lake, Besant and Avonlea represents the only effort in this direction. Clearly, both theoretical studies and assemblage analyses directed towards the ethnicity problem are important to advancing Plains prehistory.

## Retrospect and Prospect

Although there remain many unresolved issues in Alberta Plains prehistory, the last decade has witnessed some substantial gains in our appreciation of this archaeological record. In part, these gains may be attributed to an expanded data base, a direct product of historical resources impact assessments and mitigation conducted under the requirements of the Historical Resources Act (Chapter H-8, Revised Statutes of Alberta 1980). For the entire province, the number of site records has leaped from 6,100 (pre-1974) to 16,500. Many of the sites described in this manuscript - i.e., the Sibbald Creek site, site EfPl-93, the Hawkwood site, site EgPn-146, the Mona Lisa site, the Southridge site, the Bow Bottom site, the Coal Creek site, the Ross Glen site, site EhPc-105, and the Hartell Creek site - were excavated as a result of this provincial legislation.

Alberta is fortunate to have more than its share of good corporate citizens, and well-defined working relationships have been established between public sector developers such as Alberta Transportation and Alberta Environment, and the Archaeological Survey of Alberta. For example, when the value of the Sibbald Creek site was recognized, Alberta

Transportation realigned the highway to avoid the cultural deposits. These relationships have been of mutual benefit; Melcor Developments Limited received national publicity when the Hawkwood site was discovered in their proposed housing subdivision. A temporary museum was constructed as part of their sales campaign. Work conducted under the auspices of the Historical Resources Act has made a significant contribution to understanding Alberta's past.

Avocational archaeologists, members of the Archaeological Society of Alberta, have also made important contributions to Plains prehistory. Inspired volunteers, labouring in the summer heat of southern Alberta, have produced superb maps of important stone feature sites. Led by dedicated professionals, they have investigated such rare sites as the Laidlaw Antelope Trap (Brumley 1984) and the Ellis Medicine Wheel (Brumley 1985). The annual conference which they sponsor is an important forum for the exchange of ideas. As well, their publications have disseminated knowledge of Alberta prehistory to the general public. The volume entitled Alberta Archaeology: Retrospect and Prospect (Moore 1981) is a noteworthy example.

One can hardly write about the progress made in the study of Plains prehistory without noting the contribution made by university students. Here, I refer not only to their degree research - probably some of the most intensive research conducted in the province - but also their contributions to public archaeology. Lectures to the public, and work with the avocational archaeologists, have been shouldered by generations of students at Alberta's universities. Chacmool, the archaeological association of The University of Calgary, conducts an annual, student-run conference which has become one of the major gatherings of Canadian archaeologists. Indeed, Reeves' (1969) first synthesis of Alberta Plains prehistory has pride of place in the proceedings volume from the first Chacmool conference. Students from the University of Alberta recently organized a symposium between Saskatchewan and Alberta archaeologists, the first time a working dialogue has been established between the provinces.

In prospect, one can only be optimistic that further progress will be made in the study of Alberta Plains prehistory. The interaction of faculty, students, consulting archaeologists, avocational archaeologists,

and government archaeologists is a powerful force to bring to bear on the problems of prehistory. Enlightened legislation has provided a framework wherein the proper management of historical resources concerns can be resolved, and the study of Plains prehistory advanced.

## Concluding Remarks

In this review, I have concentrated upon the interpretations of Alberta Plains prehistory. The reconstruction of the past is an exciting but often frustrating task. Putting people into prehistory is surely our most important challenge; otherwise Plains prehistory is hardly more than a catalogue of dead buffalo. Simply because this task is formidable does not mean we should abandon the attempt.

Table 1. Provenience of projectile points illustrated.

| Type | Source |
|---|---|
| Clovis | cast; probably Dent site, Colorado |
| Basally-Thinned Triangular | Sibbald Creek site, Alberta |
| Folsom | replica |
| Agate Basin | cast; Wyoming |
| Hell Gap | cast; Hell Gap site (?), Wyoming |
| Alberta | Johnson collection, Alberta |
| Scottsbluff | Cameron collection, Alberta |
| Eden | cast; Claypool site, Colorado |
| Frederick | cast; ASA collection |
| Park Hill Lanceolate | Boss Hill site, Alberta |
| Boss Hill Corner Notched | Gwynne Tower site, Alberta |
| Bitterroot | Glenbow collection, Alberta |
| Oxbow | Glenbow collection, Alberta |
| McKean | Glenbow collection, Alberta |
| Duncan | Glenbow collection, Alberta |
| Hanna | Glenbow collection, Alberta |
| Pelican Lake | Glenbow collection, Alberta |
| Besant | Glenbow collection, Alberta |
| Sandy Creek | Mortlach site, Saskatchewan |
| Sonota | Muhlbach site, Alberta |
| Samantha | Glenbow collection, Alberta |
| Timber Ridge Side Notched | Head-Smashed-In site, Alberta |
| Head-Smashed-In Corner Notched | Head-Smashed-In site, Alberta |
| Prairie Side Notched | Glenbow collection, Alberta |
| Plains Side Notched | Glenbow collection, Alberta |

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# DOG DAYS IN SOUTHERN ALBERTA

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ABSTRACT

This volume addresses the question of the positions of various Plains Indian tribes across the southern Alberta landscape at about the time of first European influence and, later, actual European contact. The primary data sources consulted are the published historic and ethnographic accounts of the four tribes given serious consideration: the Blackfoot, the Kutenai, the Gros Ventre and the Snake or Shoshoni.

It is argued that, although there is much contradictory evidence, the most likely scenario for Late Prehistoric to Protohistoric Period tribal positions in southern Alberta is as follows: the Blackfoot occupied the Parkland region of central Alberta and western Saskatchewan; the Kutenai resided in the mountains, foothills and Plains of southwestern Alberta; the Gros Ventre inhabited the area around the Forks of the Saskatchewan rivers in south-central Alberta and Saskatchewan; and a group called the Snake occupied most or all of southern Alberta as far north as the Bow River. It is further argued that the Snake are most likely a group of Shoshoni Indians who had migrated from the southwest out of the Great Basin.

The essay concludes with a discussion of the potential contributions of archaeological studies to the resolution of problems of identifying ethnic or tribal groups. A case study from Saskatchewan is presented which documents encouraging results with respect to placing prehistoric/protohistoric Cree positions using a combination of archaeological and ethnohistoric records. The search for ethnicity and tribal placements in the archaeological records is also discussed.

## ACKNOWLEDGEMENTS

This paper originated from a request by John Dormaar and Terry Moore to prepare a report on the topic of later Prehistoric/Historic Period peoples of southern Alberta for the 1985 annual meeting of the Archaeological Society of Alberta in Lethbridge. I thank these gentlemen for involving me in this project and for encouraging me to pursue a paper that clearly turned out to be more complicated than we all had imagined. Dr. Moore, who is preparing a publication of the conference papers, graciously consented to publication of the full report in the Archaeological Survey of Alberta Occasional Paper series, and I am grateful for his advice and encouragement with this paper.

An early draft of the report was commented on by Hugh Dempsey, Richard Forbis, Brian Ronaghan, and Dale Russell. Comments from these gentlemen resulted in the correction of several factual errors I had made, as well as a thorough reconsideration of some of my interpretations. At the same time as I express my sincere appreciation for the advice provided, I nevertheless accept full responsiblity for the views expressed in this report. Two office colleagues, David Burley and Rod Vickers, likewise provided a stimulating environment during the production of this report, and I thank them for their interest and support. That some of the research and writing of this paper was conducted in the Archaeological Survey of Alberta office is indicative of the support of research advocated by the Director of the Survey, Paul Donahue. For this freedom, and for initially recommending that I address this topic, I thank him.

The secretarial services of Kathy Miller and Martina Purdon have greatly improved the report. Kay Brink and Gabriella Prager have both provided expert editorial services. Finally, my thanks to the professional and avocational archaeologists of the Northern Plains whose interest and enthusiasm makes this type of research seem so rewarding.

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# INTRODUCTION

> When elderly Blackfoot Indians refer to this pre-horse period, they commonly identify it by the expression "when we had only dogs for moving camp." Let us simply refer to that time as "dog days" (John Ewers 1958).

This paper addresses the question of the locations of various native Indian groups across southern Alberta and adjacent regions at the time of the first contacts with European culture and eventually with Europeans themselves. The goal of this exercise is to attempt to resolve some of the ambiguity regarding which different tribal groups resided in what areas of the Northwestern Plains just as European culture irrevocably changed the nature of Plains Indian life. Success in this endeavour may better prepare us to examine the archaeological record of the Northwestern Plains with the aim of correlating the material remains of prehistoric groups with the historic, named tribes. Furthermore, the endeavour itself may shed some light on the basic nature of these Plains groups with respect to their activities and behaviors associated with travel, migration, warfare and concept of territory. Although the paper title refers to the vast span of time during which native culture existed free of European influence, the reader will soon note that the great bulk of the data employed in this study is of a historic nature. The title reflects the concern with deducing native positions at the time of contact, and not the method by which this is achieved.

The task at hand is formidable. The likely origins, migrations, and territorial boundaries of a single people could easily consume an entire essay, and we must touch on more than a dozen groups. Further, the investigation must include critical historical records as well as ethnographic and anthropological reports. Finally, the question can also be seriously addressed through an examination of the archaeological record of relevant areas. Clearly, accomplishing all these goals is beyond the scope of this paper, and one cannot hope for a magical solution to questions of such enormous complexity. The purposes of this paper are to attempt a broad and comprehensive review of the stated subject; to present the major arguments and relevant data; to comment on and evaluate these data when possible; and to provide a basic reference

work which may allow other students of the subject to pursue further research.

Three primary lines of evidence will be brought to bear on the topic of tribal placements in the Late Prehistoric-Historic transition period. Most importantly, the historical records which shed light on tribal positions and movements in and around southern Alberta will be emphasized. By and large, these are the journals of fur traders and explorers who generally were the first Europeans to contact the relevant native peoples. True, these documents are at times flawed and often painfully short on desired details, yet they remain our very best evidence. With few exceptions, the accounts consulted are the published versions of these historic documents. Undoubtedly, this report could have benefited significantly by inclusion of unpublished materials, especially some of the Hudson's Bay Company records. This acknowledged flaw will leave ample room for growth and development of the subject matter.*

Secondly, the ethnographic and anthropological works pertaining to these peoples, which often incorporate a review of tribal origin and migration legends or traditions, will be consulted. Although the focus will be on the earliest of these studies, it is recognized that all these accounts suffer from the effects of time on the memories of the elders. Finally, the potential contribution of archaeological studies to the question of tribal identity and territory will be briefly examined. Largely, this will focus on the well recognized problems and some potential directions which might prove fruitful, rather than the specifics of the archaeological data.

Native Indian groups which either did figure or may have figured in the late prehistoric and historic utilization of southern Alberta and adjacent lands include representatives of five major language stocks: the Algonkian family (Blackfoot, Blood, Peigan, Gros Ventre/Atsina, Plains Cree); the Siouan family (Mandan, Hidatsa, Crow, Assiniboine); the Athapaskan family (Sarsi); the Shoshonean or Uto-Aztecan family (Shoshoni); the Salishan family (Flathead, Pend d'Oreille), and the

*Unless indicated otherwise, all quotes in this text are reproduced without alterations or additions.

Kitunakan family (Kutenai) (Wissler 1922; Lowie 1954; Hoijer 1946). Clearly, detailed consideration of the protohistoric and historic record of all these groups is prohibitive. The great array of potentially relevant groups is presented here more to illustrate the lack of fixed limitations regarding territoriality on the Northwestern Plains than to suggest that all these groups lay serious claim to late prehistoric occupation of southern Alberta. Only four tribal groups will be examined in detail: the Blackfoot, Kutenai, Gros Ventre/Atsina and the Snake/Shoshoni.

The Plains Cree are generally considered to be relatively recent immigrants to the Plains region (Mandlebaum 1979; Russell 1982). The Siouan family groups likewise may have been reponsible for very late prehistoric incursions into southern Alberta and Saskatchewan (Byrne 1973; Russell 1982). The Cluny earth lodge village, situated on the Blackfoot Reserve, is considered to be the remains of middle Missouri Siouan people moving into southern Alberta and attempting agricultural pursuits (Forbis 1977; Byrne 1973). This protohistoric phenomenon has no known counterpart in prehistoric times.

The Siouan speaking Assiniboine are arguably a Plains group more relevant to our present purpose. Writing in the 1850s, Denig reports on the well remembered separation of the Assiniboine from the Sioux sometime around 1760, "After this first separation from the Sioux they moved northward making a peace with the Cree and Chippewa, took position of an uninhabited country on or near the Saskatchewan and Assiniboine Rivers" (1930:395). Denig (1930:396) distinguishes between the Northern and Southern Assiniboine; the former resided on the northern prairies to the east and north of the Blackfoot range on the banks of the Saskatchewan, Assiniboine, and Red Rivers. The Southern Assiniboine resided south of the Milk River to the Missouri and down this river to the White Earth River (Denig 1930:397). Russell (1982:169-171) also distinguishes between Northern and Southern Assiniboine, suggesting that the former were forest dwellers and the latter were prairie/parkland peoples.

Denig says of early Assiniboine territory:

> As has been stated, at the earliest date known they roved about the head of St. Peters, Des Moines, Lec dy Diable, and Lac qui Parle; and they were joined with the Sioux Indians, who inhabited and claimed all the lands between the Mississippi and

> the Missouri... the extent of land they occupied in the British territory on the Saskatchewan, etc., was very large, but at present their habitat is very different (Denig 1930:396).

Russell (1982:171) cites the earliest specific reference to the Assiniboine as that of Joseph La France who, in 1749, placed the "Assinibouels of the Meadows" on the west side of "Lake Quinipique," and a great way further north were the "Assinibouels of the Woods."

In summary, the available literature indicates that the Assiniboine were aligned with the Sioux in late prehistoric times. Furthermore, it appears that two groups of Assiniboine existed: a northern forest adapted group, and a southern parkland/prairie adapted group. There is little evidence that either of these two Assiniboine groups occupied the Plains of southern Alberta. Instead, they were likely situated in the centre of the continent, generally in the area bounded by Lake Winnipeg and the Missouri-Mississippi Rivers.

Another group which may be eliminated as a potentially early southern Alberta resident is the Sarsi. This Athapaskan speaking group is clearly a recent immigrant to the Plains from the boreal forest (Jenness 1938; Goddard 1916). Their movement to the Canadian Prairies was likely an early Historic Period event and will be mentioned later in the text of this essay. Likewise, the Crow and the Interior Salish tribes can be shown to have played an important role in the Historic Period on the northern Plains, but there is little evidence for late prehistoric occupation of the Alberta region (Lowie 1935; Teit 1930). These groups will also be reintroduced later in the discussion.

## BLACKFOOT

The Blackfoot Nation or Confederacy consists of three very closely related tribes of Algonkian speakers: the Pikuni (Peigan), the Kainah (Blood) and the Siksika (Blackfoot) (Ewers 1958:5). The name for the group as a whole originates from the Blackfoot word Siksikauw (Ewers ibid.) which translates as Black-footed people. According to Grinnell (1892:153), the Blackfoot are really one people, having probably originated as one tribe. Similarly, many authors make the point that all three Blackfoot groups have probably always resided in close proximity to

each other (see Wissler 1910:8). And finally, the basic culture, language, and physical type of the three groups are essentially identical, although political independence is maintained (Kidd 1937:4). The only dissenting opinion I have seen regarding the essential unity of these three groups comes from an oral tradition recounted to Turney-High by a Kutenai Indian named Wiskey Jim: "Wiskey Jim, for example reports that the Peigan but not the rest of the Blackfoot category were originally Kutenai" (Turney-High 1941:11). This matter will be discussed in more detail later in the essay. Unless otherwise specified, the use of the term Blackfoot will apply to all three members of the confederacy.

In the minds of most people, no native group is more firmly associated with the southern Alberta prairie than the Blackfoot, yet as we shall see, the association is, at best, tenuous. Pursuit of Blackfoot origins and homelands leads us into a complex tangle of confused and conflicting historical and ethnographic data which, appropriately, will form a substantial portion of this report, since the issue of the Blackfoot bears directly on all other tribal locations. First we will examine the issue of Blackfoot linguistic status.

## Blackfoot Linguistics

The Blackfoot name itself (Siksikauw = Blackfooted people) has figured in the arguments regarding the origins of these people. The Rev. John McLean communicated the following to Horatio Hale in 1885: "'The former home of these people,' he writes, 'was in the Red River country, where, from the nature of the soils which blackened their moccasins, they were called Blackfeet.'" (Hale 1885:700). A perceptive response to this argument was provided a few years later by the great Blackfoot chief, Crowfoot, in an interview with the Rev. Edward Wilson:

> "I know," he said, "the character of the soil in all parts of this country. The soil of Manitoba I know is black, but that proves nothing, for this soil where we are now living is black also, and hence our friends to the south call us Blackfeet: our true name is 'Sokitapi,' the prairie people" (Wilson 1887:12).

Much has been made of the fact that the Blackfoot, as Algonkian speakers, must be related, however distantly, to the basic stock family which resides almost entirely in the eastern woodlands. Thus, when the

first white man to reach the Saskatchewan River, Kelsey, mentioned a group of natives to the west of the Cree and Assiniboine "who don't know how to use canoes and who are resolved to go to war," the implication drawn by many is that this must, by default, be the Blackfoot (see Lewis 1942:10). Hale (1885:701) informs us that Mackenzie, who was fairly well acquainted with Cree and Ojibway speech, stated that the Blackfoot language had no affinity with any other Indian group that he knew of. A similar conclusion was reached by the philologist Albert Gallatin in 1836 after he had examined a list of 44 Blackfoot words complied by Umfreville (cited in Hale 1885:701). Gallatin reversed this decision a few years later, however, after he had examined an expanded word list, pronouncing Blackfoot to be clearly related to the Algonkian stock (cited in Hale 1885:701). As the reader will soon come to appreciate, these early references to Blackfoot words provided by Mackenzie, Umfreville and others can all be questioned on the grounds that we cannot be positive that the words were in fact obtained from the Blackfoot as opposed to other western groups.

The Blackfoot have long been viewed as the westernmost of the Algonkian speakers, and Sapir (cited in Voegelin 1941:27) has argued that this stock can be found all the way into California. Further in this regard, Voegelin (cited in Lewis 1942:8) has commented on the affinities between the Blackfoot and Kutenai languages. Although Voegelin and virtually all other researchers are in agreement on the ultimate Algonkian origin of the Blackfoot language, they note that this language, and that of the Gros Ventre (Atsina), differs dramatically from "mainstream" Algonkian speakers such as the Cree (Voegelin 1940:505; Kroeber 1939:81; Ewers 1958:6). As Kroeber notes: "these two groups are both Algonkin, but of speech highly diversified, as well as from each other as from the great body of Algonkin" (1939:81).

Language is clearly a pivotal issue in the investigation of a people's relations, histories and movements. Wissler is correct in asserting that, "In solution of these [people's origins], linguistic research must play the major part" (1908:201 brackets added). Unfortunately, the language relationships of many of the tribes pertinent to this essay have not been well studied, and only a few tantalizing clues - but no solutions - are available. However, the sheer

distinctness of the Blackfoot language has been the basis of major hypotheses regarding Blackfoot origins, to wit:

> This would seem to argue for a long separation from the eastern groups, and is confirmed by historical data which shows that the Blackfoot were the earliest Algonkian people to inhabit the northern Plains in historic times (Lewis 1942:9).

and,

> Differentiation of such sort does not generally occur in languages that remain in geographical contiguity and intercommunication with the parent stock. It does often proceed with rapidity in languages that are subjected to contacts principally with alien idioms. If the Arapaho and Blackfoot drifted to the base of the Rockies a fairly long time ago, we should see them fulfilling all the geographical and historical conditions which in theory would be needed to account for their set-off linguistic status. Moving them into their recent habitat since the introduction of the horse, or even a century or so before, would not allow time for the existing degree of diversity, according to all authentic precedent on the rate of alteration of speech (Kroeber 1939:81-82).

The distinctiveness but basic Algonkian nature of the Blackfoot language is generally used to substantiate the view that this group originated from a homeland located considerably further east and northeast of its present territory. Hale's study of the Blackfoot led him to conclude that the Blackfoot were pushed west from a Red River homeland, and the encountering of new peoples to the west produced the distinctive nature of the Blackfoot Algonkian language (1885:703-4). Wissler notes of the mainstream Algonkian speakers, the Cree, "that they migrated from the region of the Great Lakes seems certain," and he adds, "that the Arapaho, Atsina, and Blackfoot came to their historical habitats in similar fashion is the natural assumption" (1908:199). Although an ultimate eastern woodland (Algonkian) origin is recognized, the distinctive nature of Blackfoot linguistics is often explained by the fact that this tribe is the most westerly of all Algonkian groups and thus more removed from the "homeland" or core of Algonkian speech. Simultaneously, Blackfoot language and culture was modified by contact with groups still further to the west who spoke entirely different languages. Ewers (1958) has championed this position, suggesting that the Blackfoot may have occupied the western edge of Algonkian speakers'

territory for a considerable time before moving on to the Plains proper. From this parkland-prairie ecotone, the Blackfoot may have come into contact with Athapaskan, Shoshonean, Siouan or other language speakers, thereby accounting for the marked differences between Blackfoot and all other Algonkian dialects (Ewers 1958:6,7).

The consensus of an Algonkian basis for the Blackfoot language is broken only by a minority opinion of a Kutenai-Blackfoot affiliation. Voegelin (1941:27) has hinted at this possibility, calling it "an impression"; Sapir also arrives at this opinion after apparently waffling on the issue of Kutenai linguistic affiliations for some time (cited in Turney-High 1941:190). Turney-High points out that he is not competent to assess Sapir's suggestion, but does caution that, "this is only an interesting hypothesis," and adds, "there is more than a little reason to believe in a former Kutenai-Blackfoot connection, enough so that I suspect it myself on ethnological grounds. But much more work than has been done is needed if this classification can be considered authoritative" (1941:190).

Overall, this minority view must be seriously questioned. Chief Crowfoot, in his 1887 interview with Wilson, stated that there were no people west of the mountains who related to Blackfoot in any way, and that the Blackfoot did cross the mountains to trade but the people who lived there (presumably Kutenai at that date) were strangers who spoke a different language (Wilson 1887:12). Sapir's changes of heart on Kutenai classification are certainly suspect. The peculiar Kutenai language is most often classed in textbooks as a totally distinct stock (Hoijer 1946). Turney-High states that, despite Sapir's comments, he feels that the Kutenai language is related to other Salish speakers (1941:10). Wissler has stated that the Kutenai language may be morphologically related to the Shoshonian stock (1908:200). Finally, Voegelin, after raising the possibility of a Kutenai-Blackfoot relationship, leaves no doubt about his view on Blackfoot origins: "... though certain specializations will be shown here ... the impression remains that Blackfoot is not remarkably different morphologically from Central Algonquian languages. Its divergence, therefore, rests almost entirely on lexical differences" (1940:506). Thus, although the data are far from satisfactory on this critical issue of language relationships, the

balance is clearly tipped toward acceptance of the traditional interpretation, that is, that Blackfoot is related, albeit distantly, to the Algonkian family centred in the eastern woodlands of North America. When, where and why these distant cousins separated from the mother stock will be examined next by means of historical and ethnographic evidence.

Blackfoot: Historic and Ethnographic Evidence

Any indication of confusion or contradiction in the evaluation of Blackfoot language origins and affinities pales in comparison to the situation regarding the historic and ethnographic accounts of tribal origins, boundaries and movements. Blackfoot origins and their late prehistoric geographical position remain a mystery. Over forty years ago, Oscar Lewis referred to this issue as, "one of the puzzling problems in the history of the northern Plains" (1942:7), and four decades of scholarship have done little to resolve the puzzle. We might, I suppose, claim that some progress has been made since 1963 when Forbis said that the Blackfoot could be shown to have migrated to their present home from every direction except west (1963:10); my own research shows that Wissler (1910:17,18) refers to Peigan oral traditions which specify a westward, trans-mountain homeland. Thus, all cardinal directions are now accounted for.

Kelsey's visit to central Saskatchewan seems to have left no record relevant to our topic beyond the obscure comment about the warlike and canoeless natives to the west of the Cree and Assiniboine. Slightly more information was recorded by Anthony Henday who was probably the first European to penetrate central and southern Alberta, in 1754-55. A fur trader from York Factory, he was accompanied by Cree and Assiniboine guides and had been sent by the Hudson's Bay Company to try to convince the equestrian natives of the Plains to become involved in the fur trade. In August of 1754, Henday recorded meeting "Archithinue" Indians hunting buffalo on horseback near present-day Saskatoon (Burpee 1907) (see Figure 1). The identification of this group, the Archithinue (spelled in an endless number of ways), has been the source of much confusion and debate. The editor of Henday's journal, Burpee, suggested that Henday was referring to the Blackfoot Indians (1907:316). This view is shared by Oscar Lewis in his analysis of fur trade effects on

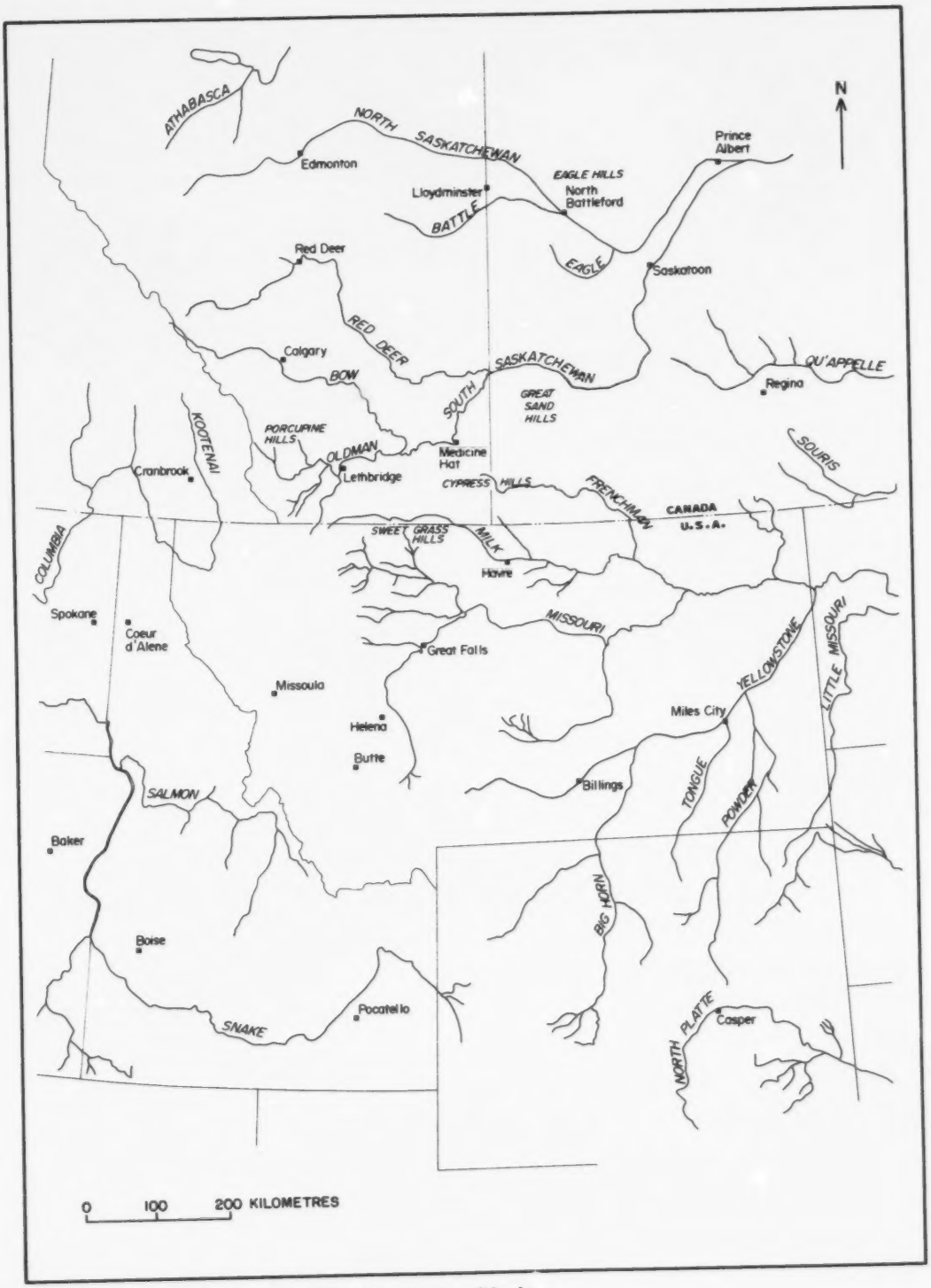


Figure 1. Map of the Northwestern Plains.

Blackfoot culture (Lewis 1942:16). Wissler, however, believes these Archithinue to be Gros Ventre Indians (1936:5). Most important in this regard, however, is Flannery's analysis demonstrating that the Cree word "Ayatchiyiniw" is a generic term for stranger and was applied to all non-Cree (1953:1,2). The Cree were by far the most important native group to the early fur traders, and Flannery (ibid.) points out that many Cree words were adopted by Europeans. Mandelbaum (1979:166) notes that since the Blackfoot were the prime enemy of the Cree, this term was most frequently applied to them. This seems to have created the impression that Archithinue, or some variation of it, is the Cree word for Blackfoot, which it is not.

Thus, the term Archithinue definitely includes the Blackfoot nation, but also includes other peoples. In fact, Henday's journals indicate this when on October 15, 1754, he noted that the enemies of the Archithinue were also called the Archithinue (Burpee 1907:339). Given the close relations between the three Blackfoot tribes, it is virtually inconceivable that they were at war with each other, hence the term Archithinue must apply to more than just the Blackfoot. A citation from the journals of Cocking, to be presented shortly, removes any final doubt in this matter.

Henday met a few of the Archithinue Indians while he was on the North Saskatchewan, near the "elbow," northeast of present-day Saskatoon (entries for August 23, 24, 1754; Burpee 1907:330). A passage written a few days later, however, suggests that this area, just shy of the Eagle Hills, was considered to be one where the Archithinue would likely be encountered: "... the Buffalo has taken the route upwards, and is the reason we have not yet met with Archithinue Natives" (Burpee 1907:331). Yet at the same time, Henday (ibid.) met a group he called the Eagle Indians, which he described as speaking the same language as the Assiniboine travelling with him. Russell (1982:173) states that these are Assiniboine and not Blood Indians as others have suggested. The fact that Assiniboine were living in or near the Eagle Hills of Saskatchewan may indicate that the country was not fully occupied or controlled by the Blackfoot nation.

By mid-October, Henday was in south-central Alberta, on or near the Red Deer River in the vicinity of the present-day community of

Drumheller. Although he had encountered Archithinue natives several times, he now came to a camp of 200 tents. Unfortunately, no further breakdown of who these people were is provided. Henday attempted to convince these equestrian natives to journey to York Factory to trade, but met with no success:

> But he answered, it was far off, and they could not live without Buffalo flesh; and that they could not leave their horses, and many other obstacles, though all might be got over if they were acquainted with a canoe, and could eat Fish, which they never do. The chief further said they never wanted food, as they followed the Buffalo and killed them with Bows and Arrows; and he was informed the natives that frequented the settlements were oftentimes starved on their journey. Such remarks I thought exceedingly true (Burpee 1907:338).

The first half of this passage has often been cited as evidence that the Blackfoot nation did not recently migrate to the Plains from a forest or parkland home, for they surely would not have forgotten or denied familiarity with canoes and a liking of fish. Forbis, for example, regards these as, "strange remarks for Indians who had just left the bush country" (1963:15). Wilson (1887:13) also remarked that the fact that the Blackfoot did not build canoes nor eat fish is proof that they did originate from the east. Seldom is the second half of the quote repeated, but it tends to support McCullough's (1982) argument that the Blackfoot were reticent about travelling through the forests, primarily because there was no need to do so. Henday himself admitted the truth of the argument; having spent weeks travelling in canoes, often famished, with sickness and even death of his native companions not uncommon and plagued by mosquitoes, Henday's spirits and his food supply noticeably improved as he entered the "pleasant and plentiful country" of the parkland-prairie margin (entry for August 1). It is clear that the Blackfoot were doing quite well on the Plains, and a journey into the boreal forest would have constituted a major disruption of their lifestyle. The one instance I know of where a Plains Indian actually travelled to York Factory produced the following comments from the chief factor, Andrew Graham:

> Since the year 1756 several Englishmen have been sent annually inland to ... invite down the Archithinue Indians to trade, but have not yet succeeded, and I am certain never will ... I did

> my utmost to endeavour to search and find out the reason why the Archithinues could not be got down to trade, and the reasons they gave me were always the same as mentioned by Anthony in his Journal ... In 1766 I had an opportunity of conversing with an Archithinue Indian man who was brought down to York Fort by one of our prime leaders, who seemed to be a man of consequence by the great care the leader and his followers took of him ... I talked and did all in my power to get down him and his countrymen next year, but he generally told me that he himself would never come down again, as he did not like to sit in the canoe and be obliged to eat fish and fowl as he had done mostly coming down (Williams 1969:256-7).

It does not seem necessary to postulate an extended history on the Plains in order to explain the type of response the Blackfoot gave Henday. Only, a few generations of Plains occupation may have been sufficient to instill a strong sense of belonging, especially once the horse became available. The Sarsi and Plains Cree are both good examples of groups that left the forest and in a very short period of time became thoroughly "Plains-like" (Mandelbaum 1979; Jenness 1963, 1938; Goddard 1916). Once adapted to a Plains lifestyle, especially as mounted hunters, the Plains Indians likely adopted the attitude common to nearly all tribes, i.e., that their own way of life was superior to that of their neighbours. In this respect, it might well be expected that they would deny knowledge of canoes and a taste for fish primarily because these were associated with the lowly peoples of the forest. Finally, we should question the apparent emphasis on the use or non-use of canoes as an indicator of cultural relationship. For example, while the Assiniboine are firmly stereotyped as efficient canoeists, many of this group could not paddle a lick (see Russell 1982:171). Similarly, the arguments centring around the ability to use canoes has created a false polemic between the forest and equestrian natives. Many Cree and Assiniboine Indians also never travelled to Hudson's Bay, yet no one argues that they were culturally unable to do so.

Henday's journal also indicates the approximate number and location of the Archithinue natives. While we know that this term likely includes more than just the three Blackfoot groups, it is reasonable to assume that many of the Archithinue natives were Blackfoot. Henday recorded that his group was joined by some very large groups of Archithinue while working his way back east from the central Alberta Plains. I noted

contact with 100 tents, 127 tents, 30 tents and 70 tents, all in the lower South Saskatchewan area nearing Fort La Corne, probably to the southwest of present-day Saskatoon. As Henday was paddling 30 miles or more most days, it is unlikely that these encounters represent many (or any) of the same people. Assuming between 5 and 10 people per tent, there were apparently several thousand Archithinue in this area in the springtime. This is a formidable sized group, suggesting that this country was thoroughly in the hands of the collective Archithinue at that time. Several months before, in the fall, Henday met several thousand Archithinue on the Red Deer River in south-central Alberta. It is impossible to know how many "repeaters" Henday may have encountered during these seasonal episodes, and likewise how many were Blackfoot, Sarsi, Gros Ventre or others, but the impression gained is that of a sizeable range for these Archithinue people. Whether this sizeable range was a seasonal phenomenon or represented lands utilized year round by single groups cannot be determined from Henday's accounts. It seems curious, however, that, moving westward in the fall, Henday met very few Archithinue natives between the lower North and South Saskatchewan rivers, instead encountering the main body of 200 tents in central southern Alberta. On his return in the spring, he noted few Archithinue until near the forks, where many large groups were encountered. These references may indicate the seasonal movements of these people over a large region. On the other hand, Henday and his crew may have had some influence in directing tribal movements on the Plains. As the first white man seen by these people, it is quite possible that his presence in the region was an exciting event which generated some unusual tribal movements.

In 1767, another Hudson's Bay Company employee, William Pink, travelled from York Factory up the North Saskatchewan River to the Beaver River, across the Amisk River, and eventually trapped beaver northeast of the present site of Edmonton. On his way back over to the North Saskatchewan River, in the vicinity of present-day St. Paul, he encountered a "large band of Archithinue, probably Blackfoot," and a few days later, farther east, "he came on Archithinues of a different kind, and at war with his earlier visitors. These would be the Gros Ventre or Fall Indians" (Morton 1939:278). These tribal identifications are by the

historian Morton, not by Pink who simply referred to them as Archithinue. This brief passage, however, is instructive for two reasons. Although the term Archithinue encompasses a number of groups, it is still reasonable to suppose that at least one of Pink's two encounters was with Blackfoot peoples, and this thus places some of the confederacy along the North Saskatchewan River at that time. Second, the passage corroborates Henday's account of two Archithinue groups being at war with each other. Unfortunately, it is still unclear which specific groups were feuding.

The next explorer/fur trader to penetrate the study area was Mathew Cocking. Cocking was also a Hudson's Bay Company employee who, in 1772, journeyed from York Factory to the Plains of Alberta. Cocking was also pursuing the equestrian natives in order to encourage them to trade. He too referred to these people as the Archithinue; however, we at last discover the minimum composition of this group when Cocking encountered 28 tents of these people on the South Saskatchewan River, probably near present-day Battleford:

> Our Archithinue friends came to us and pitched a small distance from us ... One of the Leaders talks the Asinepoet language well, so that we shall understand each other ... This tribe is named Powestic-Athinuewuck (i.e.) Waterfall Indians. There are 4 tribes, or Nations, more, which are all Equestrian Indians, viz. Mithco-Athinuwuck or Bloody Indians, Koskitw-Wathesitock or Blackfooted Indians, Pegonow or Muddy-water Indians and Sassewuck or Woody Country Indians (Burpee 1908:110-111).

This critical and often cited passage clearly identifies the three members of the Blackfoot Nation as Archithinue, and also includes the Sarsi (Sassewuck) and the Waterfall Indians. The latter group is commonly identified as the Gros Ventre; however, there is considerable debate about this, as will be discussed later. While Cocking's account, as published, does not clearly indicate whether or not these various groups were in fact travelling together (to me it implies that they were), Russell (personal communication 1985) informed me that Cocking only actually encountered the Waterfall (Atsina) Indians. This clarification is apparently based on the fuller, unpublished accounts by Cocking in the Hudson's Bay Company Archives. Be that as it may, Cocking's account suggests amicable relationships between the Blackfoot

Nation, Sarsi and Gros Ventre. The previous accounts of Henday and Pink which indicated that different Archithinue groups were feuding suggest that either there were still more people called Archithinue than Cocking met, or that by the date of Cocking's visit, 1772, these feuds had been settled.

When Cocking prevailed upon these people to journey to York Factory he met with no success, "... they said that they would be starved, and were unacquainted with canoes and mentioned the long distance: I am certain they never can be prevailed upon to undertake such journies" (Burpee 1908:111). These remarks are nearly identical to those provided to Henday some 18 years earlier.

Finally, Cocking's journal provides some documentation of a new group of Indians called the Snake. The possible identity of these people will be discussed later, in the section on the Shoshoni. At present, our concern is with the implication of this information on Blackfoot positions. Cocking's first mention of the Snake occurred while he was on the lower South Saskatchewan River, somewhere northeast of present-day Saskatoon. Horses were sighted and identified by Cocking's Cree and Assiniboine guides as belonging to the Snake Indians. As he continued westward between the two Saskatchewan Rivers, he made several more references to signs of the Snake Indians, though none were ever encountered. The Cree, Assiniboine and the Archithinue with whom Cocking was travelling were all quite fearful of Snakes, as they were at war. Most importantly, Cocking presented evidence that the territory being traversed -- the central Saskatchewan basin -- was far from securely in possession of his tribal hosts, "... the natives in general are afraid of the Snake Indians and say they are nigh at hand" (Burpee 1908:106). That this fear and adversity did not relate only to the Cree-Assiniboine was demonstrated on January 15, 1773, when a group of Archithinue rode up to his camp and announced that they were off to war with the Snakes. Unfortunately, Cocking made no mention of who the Snake Indians were or in which direction they lived. Regarding this latter issue, we will see later that south was the direction of the Snake. Thus, Cocking's report is a particularly important one for it provides valuable information on the identity of the Archithinue people, on the location of these people,

at least in part, at this date, and on the immediate presence of their enemy in the area.

As mentioned, the Henday and Cocking accounts place Archithinue Indians in the area between the North and South Saskatchewan rivers during the third quarter of the eighteenth century. Pink encountered Archithinue in the Lakeland district to the north of the North Saskatchewan and probably on the river itself. From Cocking's accounts, we know that the Archithinue included all three Blackfoot groups and, therefore, it is reasonable to assume that these three fur traders all encountered Blackfoot and other peoples. Other important direct observations on or related to Blackfoot territory were made by Umfreville (1790:197), Thompson (1786), Mackenzie (1789-93), Fidler (1792-93, 1800-02), and Henry (1810). These sources will be examined in turn.

An important observation by Hudson's Bay Company and Northwest Company fur trader Umfreville, located the Gros Ventre (Water-Fall or Fall) Indians on the south branch of the Saskatchewan River in 1781-88 (Umfreville 1790:197). According to Flannery (1953:4-5), this is confirmation of the identity of the Water-fall or Fall Indians encountered by Cocking.

Thompson's journals are especially valuable, because of the length of time he spent in western Canada, the favourable relations he shared with native people, and the insight and objectivity of his recordings (see Hopwood 1971:1-39). From his journals, Thompson produced his famous Narrative -- a book-like treatment of his travels and adventures. Unfortunately, Thompson penned the Narrative some sixty years after the end of his experiences in western Canada. As a result, there are a number of factual errors in his manuscript, some of which have been pointed out by his editors (Tyrrell 1916; Glover 1962; Coues 1897); others have presumably gone undetected. The considerable lag between the occurrence of the events and Thompson's record of them causes some uncertainty about the accuracy of some tremendously important information.

Thompson first penetrated the western parkland and northern margin of the Plains in the years 1786-88. On this trip, he wintered with the Peigan Indians in the foothills east of the Rocky Mountains between the Bow and Oldman rivers. This places the Peigan in this southwestern

Alberta position at that date. However, Thompson commented that this situation was a recent one:

> All these Plains, which are now the hunting ground of the above Indians, were formerly in full possession of the Kootenaes, northward; the next the Salish and their allies, and the most southern the Snake Indians (Coues 1897:328).

Pursuing the question of Blackfoot origins, Thompson asked his Peigan hosts about their place of origin:

> They have no tradition that they ever made use of canoes, yet their old men always point out to the northeast as the place they came from, and their progress has always been to the southwest. Since the traders came to the Saskatchewan this has been their course and progress for the distance of four hundred miles from the Eagle Hills to the mountains near the Missouri, but this rapid advance may be mostly attributed to their being armed with guns and iron weapons (Coues 1897:348).

In addition to these observations on Peigan (or Blackfoot) origins, Thompson made extensive interviews with an old Cree Indian named Saukamappee (Lewis [1942:10] erroneously refers to him as a Peigan) who was raised near The Pas, Manitoba, but who spent most of his life with the Blackfoot. Thompson lodged with Saukamappee for four months, and upon finding that they both spoke some Cree, the latter related to Thompson the previous 75 years of Blackfoot history. These stories have become the cornerstone of many peoples' arguments regarding Blackfoot origins and migrations.

Saukamappee recounted that when he was a young boy (a date Thompson figured as about 1730), the Blackfoot resided on the northern edge of the prairies along the forest margins. The Plains area to the south was the country of the Snake Indians. The Snake were more numerous than the Blackfoot. Beginning in about 1730, several great battles took place near the Eagle Hills of west-central Saskatchewan, adjacent to a large river, presumably the North Saskatchewan, but possibly the Battle River (Glover 1962:241).

According to Saukamappee, the first two battles took place before the Blackfoot had horses, although they did have a few guns at the second fight. The Snake were said to have had horses at the first battle but no guns. With the aid of the guns, the Blackfoot won a decisive victory at the second battle. Saukamappee provided an interesting statement

concerning that fight, "... had they made a bold attack on us, we must have been defeated as they were more numerous and better armed than we were, for we could have fired our guns no more than twice; and we were at a loss what to do on the wide plain" (Glover 1962:242). Saukamappee's remark about being at a loss to deal with open country is curious if this group had spent considerable time on the Plains. It is possible, however, that he spoke mainly for himself and was revealing his own forest background. Another noteworthy statement was that after the second battle, the Blackfoot conducted the necessary war ceremonies and then pitched camp "on the frontier of the Snake Indian Country" (Glover 1962:244). Since these battles were said to have taken place near the Eagle Hills, it appears that Snake Country (or at least contested territory) extended as far as the North Saskatchewan Valley, at least at its lower end.

Between these battles, a devastating smallpox epidemic occurred which is said to have wiped out half the Blackfoot people, and also to have decimated the Snake Indians. What year this occurred is not clear. It may have been the well documented epidemic of 1781, or a postulated earlier one (see Schaeffer 1982). At any rate, the terrible toll of this disease put an end to fighting while both populations tried to recover. In a revealing passage, Saukamappee said that the Blackfoot were so weakened that they would have made peace with the Snake but that this latter group had suffered dreadfully as well and had retreated (presumably to the south), "and had left all this fine country of the Bow River to us" (Glover 1962:247). Eventually, the Snake struck at the Blackfoot again, resuming the feud about the time that Thompson joined the Peigan camp.

Thus, according to Saukamappee, the Snake Indians controlled or occupied southern and parts of central Alberta at the end of the Prehistoric Period, and the Blackfoot were positioned on the northern parkland/prairie fringe. A combination of battle victories and smallpox epidemics caused a southern advance of the Blackfoot and a corresponding retreat by the Snake. When hostilities resumed in the late eighteenth century, the Blackfoot had gained control of the Bow Valley. This had been achieved more through an epidemic-induced voluntary withdrawal of the Snake rather than a military victory of the Blackfoot.

Alexander Mackenzie made some observations on the locations of Blackfoot and other tribes. He recorded the following (Mackenzie 1903:110-1): the Cree-Assiniboine were situated around Nipawin (Saskatchewan) and extended upriver as far as the Eagle Hills; next to them, the Cree resided along the North Saskatchewan River, although he implied that this was a recent position for the Cree; at the headwaters of this same river, at the foot of the mountains, dwelled the Sarsi; on the headwaters of the South Saskatchewan lived the Peigan; next to them (presumably downstream) were the Blood; still further downstream, the Blackfoot; and finally near the confluence of the North and South Saskatchewan rivers lived the Fall or Gros Ventre (Big Bellied) Indians. Thus, by Mackenzie's time, if groups were accurately located, the Blackfoot Nation was located essentially in the region corresponding to their contemporary positions. As to the permanency of these positions, Mackenzie apparently offered little comment except to note that the three groups of the Blackfoot had, in his opinion, been travelling from the southeast and that he had reason to think they were still moving to the northwest (cited in Kidd 1937:11). How Mackenzie came to this highly divergent opinion on Blackfoot origins and migrations he did not state (Wissler 1910:15). Father Lacombe provides support for this unorthodox position. When he questioned the Blackfoot on their origins, they responded that they had come from the southwest, across the mountains, from the Washington and Oregon territories (cited in Hale 1885:701).

Alexander Henry (the younger) moved through the Saskatchewan country in 1810, eventually travelling as far as the western side of the Rocky Mountains. By and large, Henry's accounts of tribal positions agree with those of Mackenzie. Specifically, Blackfoot territory was demarcated by "a line due s. from Fort Vermilion to the South Branch of the Saskatchewan and up that stream to the foot of the Rocky Mountains; then goes N. along the mountains until it strikes the N. Branch of the Saskatchewan, and down that stream to Vermilion River" (Coues 1897:524). Basically all land between the Saskatchewan Rivers belonged to the Blackfoot at that time. This again assumes that Henry was an astute and accurate recorder, which Wissler supports by noting Henry's remarkably accurate plotting of fur trade posts (1910:8). Other comments by Henry on the Gros Ventre and Kutenai will be presented later.

Peter Fidler's journal of his journey through central and southwestern Alberta in 1792-93 is an important work which has never been published and, therefore, has been unavailable to many other Plains researchers. Fidler decided to winter with the Peigan - or Muddy River Indians (Pekanow) as he called them - in southwestern Alberta, departing from Buckingham House on the North Saskatchewan River in November. The trip eventually took him to the Porcupine Hills and Oldman River valley, which Fidler noted (entry for Nov. 8, 1792) was further south than these Indians had previously gone with Europeans along.

Indian groups frequently encountered by Fidler's entourage included the Blackfoot, Blood and Sarsi (Sessuew he called them), and their comings and goings seemed so commonplace as to barely rate notice in his journal or by the Peigan. Other groups encountered or mentioned which appeared to elicit more reaction or comment from Fidler or his Peigan hosts included the Snake, the Cottonahew, the Southern Indians, the Crow Mountain, the Flathead, the Cree, the Stone, the Swampy Ground Stone, Long Hair or Long Bow, the Blue Mud, the Pauk way quay, and the Slave Indians. The identification of some of these groups is fairly certain, but others remain a mystery. The Snake are regarded by many as the Shoshoni, the Cottonahew are clearly the Kootenay or Kutenai; the Crow, Flathead and Cree are self-explanatory, while the Stone and Swampy Ground Stone are presumably the group now called Stoney, or Assiniboine. The Blue Mud and Pauk way quay are simply mentioned in one entry (Jan. 30, 1793) as groups of "the interior parts," presumably meaning to the west of the mountains. Although I could not identify them, the context of Fidler's reference suggests that they played little or no part in the native population east of the mountains. Similarly, the Long Hair or Long Bow Indians were only mentioned once (Dec. 31, 1792), and were referred to as people which inhabited more westerly regions and who sometimes used canoes. Since Fidler was writing this from the base of the Rockies, it is clear that this group lived west of the mountains. The Southern Indians are the Cree as so named by the fur traders (Ray 1974:53).

Fidler's use of the term Slave is noteworthy because it has appeared in the writings of many other observers and ethnographers and has generated considerable debate. As this debate centres on the position of

the Blackfoot in Alberta, it is worthy of review here. Grinnell, in pursuing his argument for a northern homeland for the Blackfoot (extending to Lesser Slave Lake and the 60th Parallel), attempts to make a case for identifying the Blackfoot Nation as Slaves. Grinnell says that the Cree called the Blackfoot A-wak-kan' (Slaves) and their women little slaves, thus suggesting Lesser Slave Lake (1892:158-160). He further states that he asked Henry Moberly, chief factor of the Hudson's Bay Company, about Blackfoot origins and was told that the Slave Indians were once neighbours of the Beaver Indians, inhabiting the country between the Peace and North Saskatchewan rivers. The Chipewyan moved in from the east, separating these two tribes and driving the Beaver north and the Slave south (1892:161-162). Moberly said that this was to have occurred some 200 years ago (i.e., 1690).

Wissler, in arguing against this far northern homeland for the Blackfoot, challenges Grinnell largely on the grounds of the ambiguity of the term Slave. Wissler (1910:15,16) cites Alexander Henry's use of the term Slave to refer (apparently) to all Blackfoot, Gros Ventre and Sarsi. Wissler also notes that Mackenzie recorded the use of the word Slave by Cree Indians as a term of reproach and may, therefore, have been a blanket name for Blackfoot and other neighbours (1910:17). The citation from Henry, referring to indolent Slave Indians, also argues for a generic basis to this word and to its multiple group application. Wissler also notes that Mackenzie made no mention of the Blackfoot when discussing the Slave Indian situation (1910:16-17). To Wissler, this separate use of the Blackfoot names and the word Slave casts doubt upon the association of the two, although this tends to ignore his previous point concerning the word Slave as a blanket term for many groups.

In opposition to Grinnell's citation of Moberly's version, Wissler cites Mackenzie as stating that the Slave resided west of the Beaver in central northern Saskatchewan and Alberta, and that both groups were driven out of their territories by the invading Cree. The Beaver moved to the area around Peace Point, and the Slave moved downriver from Lake of the Hills (Lake Athabasca), thereby causing the name Slave River (Wissler 1910:16). This account again casts doubt on Grinnell's argument because it fails to move the Blackfoot towards their well known Historic Period home in central and southern Alberta. In sum, Grinnell's case for

a far northern Alberta traditional home for the Blackfoot is entirely conjectural and suffers from a serious ambiguity with regard to the term Slave.

Fidler's 1792/93 journal does not completely resolve the issue of the Slave Indians, but it does shed some light on the matter. Fidler used the term Slave Indians on at least five occasions; in all cases, more than one tribe was travelling with him at the time, thereby complicating the identity of this group. Also, some of his comments seem directly related to people present, while others appear more abstract and could be referring to the activities of a group not present. On Jan. 9, 1793, while travelling with Peigan, Blackfoot, Southern Indians and Sessew (Sarsi) he noted, "at 3 PM arrived here to the 5 tents of southern and 12 tents of Sessew Indians. These Indians particularly the Cree are far from their own country and very seldom ever bring their tents and families so far from home, but they pretend to be great doctors, and all the Slave Indians believe it, they come here only to get what skins they can from these Indians." On Jan. 10, 1793, Fidler described the tending of horses by different groups and said, "the Indians particularly the Slave Indians are very careful of them. The Southern Indians pay very little attention to them and frequently they have none." On Jan. 27, 1793, Fidler described a method of killing wolves by intentionally letting them feed on bison carcasses and then chasing the overgorged animals on horseback the next day. Fidler remarked, "this ... is the general method that all the Slave Indians kill that animal." On Jan. 28, 1793, while witnessing a major religious ceremony, Fidler remarked that "The Blood Indian man that now gave us a specimen of the necromantic art was initiated by the Southern Indians, who are esteemed much by all the Slave Indians as the most expert and true prophetic foretellers." And on Feb. 28, 1793, Fidler mentioned, "We also left behind us this morning 8 tents who had not dried and stretched their wolf skins ... All these Slave Indians stretch their wolves betwixt two tent poles."

Two points are certain from these quotes: first, the term Slave refers to more than one group, and second, the term includes the Blackfoot. Bearing in mind that Fidler was travelling with a large group of Peigan, at one point numbering 190 tents, the last reference to leaving some people (almost certainly Peigan) behind to stretch their

wolf skins, and indicating how all Slave Indians stretch their skins, seems to finalize the point that Peigan, among others, are Slave Indians. Unfortunately, we are never told exactly which groups come under this term.

Fidler's other major journal, of his 1800-02 trip to Chesterfield House on the South Saskatchewan River also makes reference to the Slave Indians. From this fur trade post, precisely on the present-day Alberta/Saskatchewan border, Fidler remarked that, "Two Fall Indians were sent for tobacco, to be here tomorrow, it is a constant custom when any of the Slave Indians are coming in to the houses to send for tobacco a day or two prior to their arrival" (Johnson 1967:280). This quote firmly establishes the Fall (Gros Ventre/Atsina) Indians as also encompassed by the term Slave. My own reading of these documents suggests that Fidler was using Slave as a broad catch-all term for Indians of the west, including, but probably not limited to, the Blackfoot and the Gros Ventre. Quite likely Fidler learned the name from the Cree who may, as Mackenzie noted, have used the term as one of reproach for their neighbours. In this sense, the use of Slave is similar to that of Archithinue, and the former may in fact be a translation of the latter. This grouping could include, as Henry recorded, all Blackfoot, Gros Ventre and Sarsi. This would be expected if the term is indeed basically the Cree word for foreigner or stranger.

In sum, Fidler's journals do provide some insight into the Slave Indian issue which has plagued many researchers but, unfortunately, no unequivocal identity for the Slave is revealed. There is no question that Fidler included the Peigan and Fall Indians as Slave Indians, and since he clearly used Slave as a group name, we can logically conclude that this pertains at least to all the Blackfoot. A somewhat later reference (1810) to the Slave Indians by Alexander Henry (the Younger) makes it clear that all of the Blackfoot Confederacy were at that date included under that term: "The Blackfeet, Bloods, and Piegans may be considered under one grand appellation of Slave Indians" (Coues 1897:523). It is ambiguous whether other groups, such as the Sarsi, Flathead and Kutenai, are also included. This last point is especially important, for it has a bearing on Grinnell's hypothesized northern origin for the Blackfoot. Fidler's use of the term Slave for Blackfoot

could support Grinnell's case; however, if Slave refers to more than just the Blackfoot, Grinnell's case is weakened. As noted above, Fidler's Chesterfield House journal clearly designates the Fall Indians as Slaves. Furthermore, the tone of many of the other references suggests that other groups were also considered Slave Indians. This almost certainly includes the entire Blackfoot Nation, the Gros Ventre, and the Sarsi. The case for the Sarsi is particularly interesting in that the history of this group, which is universally recognized as a late prehistoric or early historic divergence from the Beaver Indians of northern Alberta and Saskatchewan (Jenness 1938; Goddard 1916), fits many of the details of Grinnell's story of the Slave Indians. The Sarsi would have lived with or beside the Beaver before, for unexplained reasons, moving out of the northern forests and becoming fast and permanent friends with the Blackfoot. If the Sarsi were also called Slave Indians, this well-documented movement of the Sarsi could well have generated the information which Grinnell cited as evidence for a northern Blackfoot homeland.

Aside from the question of the Slave Indians, Fidler's journal provides some insight into native positions and movements in the years before the effects of white contact were fully manifest. The Snake were frequently mentioned by Fidler in both his Buckingham House and Chesterfield House journals. The identification of this group is a problem which will be addressed later. From Fidler's accounts, we learn that Snake were commonly encountered by Blackfoot, that they periodically warred with each other, and that the Snake homeland was many hundreds of miles to the southeast. This distance figure, of course, was supplied to Fidler by natives who, as demonstrated elsewhere in his journals, were only fair at converting their geographic knowledge to a European measurement. That the Snake had frequent contacts with the Blackfoot is evident in several entries where mention was made, for example, of horse stealing and of warfare between these groups. An indication that the Snake and/or the Flathead and Crow were present in parts of southern or southwestern Alberta is provided in the entry for December 14, 1792. On that date, Fidler arrived at a river a short distance south of the Bow, probably the Elbow River, and described a Peigan encampment of nearly 150 tents. The large size of the camp was explained as follows: "When near

the Enemies Country, they are always found in large bands, that they may be the more able to resist any enemies that may dare to attack them, which is generally either the Snake, Flatheads or Crow Mountain Indians," (Fidler, entry for Dec. 14, 1792). The context of other entries recorded by Fidler at that time suggests that the groups expected at this camp were the Snake and the Kutenai. I would interpret this to suggest that the country along the foothills south of the Bow River was not comfortable Peigan (or Blackfoot) territory in the late eighteenth century. In Fidler's 1800-02 journal of his stay at Chesterfield House, there are numerous entries referring to the Snake Indians. Nearly all of these references pertain to Blackfoot and Gros Ventre (Fall) Indians stopping by the post on their way south to make war against or steal horses from the Snake (Johnson 1967:274-285). The Snake also raided into Peigan territory for similar purposes (Johnson 1967:281). This journal also contains several important remarks regarding the past position of the Snake Indians. These will be discussed in a later section of this paper.

More generally, Fidler's journals give the impression, either directly or indirectly, that groups commonly encountered at that time in central Alberta, between the Red Deer and North Saskatchewan rivers, included the Southern Indians, or Cree, and the Sarsi. The passage for Jan. 9, 1793, written while south of the Bow River, refers to these two groups as being far from their own country. This is a curious statement concerning the Sarsi, given their well-documented association with the Blackfoot, and may imply that the Sarsi had only recently split from their kin, the Beaver. In contrast, a southern position is implied or stated for the Snake, Flathead, Kutenai and Crow Mountain. One group of Snake and another of Kutenai Indians encountered by the Fidler entourage had never before seen a European. The entry of Feb. 26, 1793, indicates an eastern provenience for the Stony Indians: "...have heard lately from a Band of Stone Indians, to the Eastwards and say that no buffalo is near them." The Jan. 18, 1793, entry plots a Blackfoot position: "Several tents of Black Feet pitched away from us towards their own Country about the Red Deer river." In an engaging comment on Jan. 17, 1793, Fidler remarked on how the Peigan were fearful of his sextant, and believed that since he most frequently looked to the south, he was observing the Snake

who lived in that direction. The Peigan pestered Fidler to tell them how many tents he saw and what the Snake were up to. The Kutenai (Cottonahews) are clearly described as being of the mountains of southern Alberta. The entry for Dec. 31, 1792, mentions that a trail made by the Kutenai through the mountains at the headwaters of the Saskatchewan was the northernmost trail of these Indians. A Kutenai home west of the Rockies is indicated in this entry: "This South West branch of the river is the one the Cottonahew Indians come along from the West side of the Mountain, the Head of which by their account is about 2 of their days journey in these difficult parts which is about 14 miles from the Western edge of the Mountain." The river referred to is probably Racehorse Creek, a southwest tributary of the Oldman River just inside the Gap. The Flathead Indians were mentioned on several occasions and the occasional one was encountered, but unfortunately Fidler said almost nothing about where these people lived.

To summarize the relevant information from Peter Fidler's journals, it is clear that the three Blackfoot groups were well entrenched in at least central and south-central Alberta in 1792-93. Blackfoot were specifically located on the Red Deer River, and Peigan were implied to reside along the foothills of the Rockies. The southern extent of this range was implied by one passage to be somewhere south of the Bow River. Blood Indians were mentioned and encountered by Fidler, but were never designated a specific territory. Virtually no information was presented for eastern and southeastern Alberta, except that Fidler mentioned that both the Cree and the Stone Indians were from the east. We learn that Kutenai were commonly encountered in the mountains and foothills of southwestern Alberta, and a home just west of the mountains was indicated. Snake were also commonly encountered in southern Alberta but were said to come from a homeland several hundred miles to the southeast. Flathead and Crow Mountain groups were vaguely mentioned as southern to the Peigan. A group called Southern Indians were very common along Fidler's journey and were certainly the Cree. Finally, the term Slave Indians was used by Fidler on a number of occasions. Its exact reference is ambiguous, but it clearly does refer to the Peigan and the Gros Ventre, probably all of the Blackfoot, and possibly other groups as well. It was used by Fidler in some generic sense when he referred to

several groups of Indians at once. We know that it does not include the Cree.

## KUTENAI

Historical and ethnographic information on the prehistoric position of the Kutenai Indians is also confusing and, at times, contradictory. However, the majority opinion is that some or even all of the Kutenai once resided on the eastern side of the Rockies in the Plains of southern Alberta. This position has major implications regarding the occupation of southern Alberta, especially with regard to the location of the Blackfoot Confederacy.

We have already mentioned the peculiar problem of Kutenai language affiliations; Sapir suggested a link with the Blackfoot, Wissler mentioned morphological similarities with Shoshonean, and Turney-High perceived Salishan links. Overall, however, most regard Kutenai as a distinct language in its own right. The Wiskey Jim account, cited above, suggests a possible link between the Peigan and the Kutenai, and it was previously noted that Turney-High believes in a former Kutenai-Blackfoot connection. However, I have found no other suggestion in the literature of a link between these two groups.

Direct contact between the Kutenai and Europeans was understandably later than with other, more eastern groups, because of their position to the southwest of the Blackfoot during the period of historic contact, situated on the far side of the great stretch of plains from the parkland-forest belt of central Saskatchewan and Alberta. As mentioned above, some Kutenai who were camped in the Porcupine Hills near the headwaters of the Oldman River, met their first European in 1792 when Peter Fidler passed through. Thus, this tribe was sheltered longer from the direct effects of the fur trade, perhaps more so than any other group in the province. Fidler provides ample documentation for the intentional actions of the Blackfoot to prevent the acquisition of European items by the Kutenai (entry for Dec. 31, 1792). This enabled the Blackfoot to maintain superiority over the Kutenai and to trade with the Kutenai on their own terms.

Other historic explorers to encounter the Kutenai were Alexander Henry and David Thompson. Thompson provides some information on Kutenai history from his Saukamappee stories, and from his own encounters with the Kutenai and the Peigan. These encounters occurred during the years 1786-1790, and then again in 1800-01 and 1807. We have already cited Thompson's comments to the effect that all the Plains now inhabited by the Blackfoot were formerly in the possession of the Kutenai prior to historic times. Thompson indicates that the latter people were driven west over the mountains by the Blackfoot. Using this information, Lewis suggests that the Snakes and Kutenai were displaced west of the mountains by 1750 (1942:14). Flannery, however, argues that a careful reading of Thompson's account indicates that, although the Peigan had been gaining ground in southern Alberta, progress was not as fast as Lewis suggests (1953:6). Flannery (ibid.) would have the Blackfoot progressing to the country of the Red Deer River by about 1780, when all these groups were decimated by a serious smallpox epidemic. This suggestion, however, conflicts with evidence already presented from Henday's journals which places the Archithinue - which includes the Blackfoot - in the same Red Deer Valley country some twenty-five years earlier. The epidemic effectively halted Peigan progress, and the Snake and Kutenai retreated while the populations recouped for several years. When Thompson reached the Peigan at the Bow River in 1786, he remarked: "The country where the Snake now are is far away and little known to the Peigan" (Coues 1897:340). Unfortunately, no mention is made of the Kutenai, but presumably they were in, or west of, the southwestern Alberta Rockies by that date. The Peigan statement to Thompson that the Snake homeland was far away does corroborate Fidler's account of some six years later when the Peigan estimated that the Snake lived 250 - 300 miles south.

Henry, on his journey up the North Saskatchewan River and across the divide, commented on lodges in the mountains which he indicated were definitely made by the Kutenai Indians. Further south, at the head of the Clearwater River, he again recorded old Kutenai lodges. Henry met the Kutenai and they told him that they used to frequent the Plains to obtain buffalo provisions, and that they even used buffalo jumps. Henry reported that the Kutenai claimed they were driven into the mountains by tribes from the east (see Coues 1897:687-704).

Little additional historic material is available on the Kutenai. We now must turn to the ethnographers who have studied these people, admittedly well after the events being discussed had transpired. For the Kutenai, the most important sources are James Teit, Harry Turney-High, Claude Schaeffer and Wissler. Teit identifies a Plains Kutenai tribe as one of three Kutenai groups. This Plains group is variously called tuna'xa, tona'xa or Kutona'xa (1930:306). Teit places this group, which for simplicity we will call the Plains Kutenai, as follows:

> The last named group at one time occupied a considerable territory in what are now Alberta and Montana, extending east to the Sweet Grass Hills, and including at least the greater portion of the present Blood Reserve in Alberta and all of the Blackfoot Reservation in Montana (1930:306-7).

Teit further reports that the Plains Kutenai occupied the eastern slopes of the Rockies about as far north as Bow River and probably all of the area of the current Stony or Assiniboine Reserve (1930:307). Teit says this eastern or Plains group of the Kutenai was actually composed of several bands, most of whom, "made their headquarters in the eastern foothills of the Rockies, on both sides of the international boundary; but a large band lived at one time on the present Blood Reservation. The main seat of the tribe was near the place now called Browning in Montana" (ibid.). Teit identifies the neighbours of this Plains Kutenai group as being the Shoshoni on the southeast, the Blackfoot (probably Peigan) on the east and north, the Upper Kutenai and Pend d'Oreilles on the west, and the Salish-Tuna'xe on the south (ibid.).

Teit indicates that this pattern of residence began to change between 1700-1750 when the pre-horse Blackfoot began attacking the Shoshoni. He notes, "About the same time, when the Shoshoni were just attacked, the Blackfoot may have also driven out the more northern bands of the Kutenai (the Kutenai-Tuna'xe) that lived east of the mountains. Information obtained from the Kutenai agrees with this" (Teit 1930:317). Teit says that this Blackfoot advance continued southward, displacing numerous groups - especially interior Salish - until, "The whole country along the eastern foot of the Rockies, north of Yellowstone, was in posession of the Blackfoot and had become very dangerous ground" (Teit 1930:318). All the Plains Kutenai had lost their land to the Blackfoot, but the other

Kutenai living west of the mountains were not affected (ibid.). Teit identifies a general pattern of tribal displacement which, for his purposes, originated with the pre-horse Blackfoot and caused a shifting of many peoples to the south and west (1930:316).

Turney-High also identifies a separate Plains Kutenai called the Tuna'xa and, primarily using oral traditions, he too argues for pre-contact occupation of at least part of the Alberta prairie. However, he indicates that it is a minority of Kutenai who believe that all Kutenai originated on the Great Plains:

> There is a strong tradition even at Bonner's Ferry that the whole body of the Kutenai originated on the Great Plains and at some, to them, very ancient time gradually moved westward. This is in sharp contrast with an ethnocentric majority who have no migration stories and who maintain that the Kutenai have always lived where they were found (Turney-High 1941:10-11).

Although Turney-High seemed to get no concensus on the idea that all Kutenai originated on the Plains, there appeared to be agreement on the belief that some Kutenai had indeed resided on the Plains:

> The tradition Wiskey Jim says he received from his grand parents is that the old extinct Tuna'xa lived east on the Plains about where McLeod, Alberta is now. For reasons unknown about half of the Tuna'xa moved westward across the mountains onto the Plateau and became the Kutenai (Turney-High 1941:11).

and,

> It is said long ago there was a band of people speaking Kutenain and admitted by the true Kutenai to be of their kind who lived on the Plains. These were truly Plains Kutenai, living on the Plains after the manner of the "prairie Indians" (Turney-High 1941:13).

According to Turney-High, the fate of these Plains Kutenai was to be severely stricken with an epidemic, which was followed by migrations to the south and west, joining up with other Kutenai or Salish groups. He says that today they are entirely extinct save for some mixed bloods who claim Tuna'xa ancestry (ibid.).

Summing up his position on this matter, Turney-High prefers the interpretation that all Kutenai originally came from the Plains, but at the same time he admits that a reasonable alternative is the Tobacco Plains of the Upper Kutenai as the ancestral home of this group

(1941:18). It is noteworthy that Turney-High does not identify Blackfoot expansion and aggression as the cause of the movement of Plains Kutenai into and across the mountains.

Schaeffer, long time curator of the Plains Indian Museum at Browning and student of Blackfoot and Kutenai ethnography, takes strong exception to the theory that the Blackfoot forced a Plains Kutenai group off the Plains and over the Rockies (1982). Schaeffer cites an array of literature reporting on the Blackfoot displacement of the Kutenai (e.g., Henry, Thompson, Teit) and then proceeds to deliver his own rendition of these events, based on his own Kutenai informants. Schaeffer's informants identified a Plains Kutenai band, which he calls Michel Prairie, named after the location of their main campsite on a tributary to the Elk River (1982:4). The region of the Crowsnest Pass, on both sides of the divide, was said to be the main territory of the Michel Prairie band (ibid.). In winter, this group would venture through the Waterton Lakes region and occasionally as far as the confluence of the Bow and Oldman rivers. In contrast to other writers, Schaeffer believes that the existence of a Plains Kutenai band was probably fairly recent, just preceding the appearance of the horse in the area (1982:5). Noteworthy is the fact that Schaeffer's informants reported that no Blackfoot were in the area at that time (ibid.).

The crux of Schaeffer's arguments is that he believes there was an early smallpox epidemic, around the 1730s, which decimated the Michel Prairie band and drove the survivors west to the other Kutenai groups (1982:49). He feels that the accounts of Thompson and others to the effect that the Blackfoot drove the Kutenai from the Plains west over the mountains is entirely erroneous. D. Russell (personal communication 1985) indicates that there is no evidence in the Hudson Bay Company records to support Schaeffer's hypothesis of an early 1700s epidemic. However, it is not our purpose here to evaluate Schaeffer's epidemic theory, but rather to relate his views on the existence of a Plains Kutenai group:

> There is no evidence whatever for believing that all or most of the Kutenai resided east of the Rocky Mountains permanently at this early period. The basic pattern of Plateau culture is so well established for the Kutenai as to give no basis for assuming their Plains Culture identity in modern times... The

> most Plains-like of all Kutenai, the Michel Prairie band, seem never to have completely abandoned their connections with the Plateau in order to take up conclusively a Plains type of life (Schaeffer 1982:9).

Schaeffer thus sees the Blackfoot moving into a geographical vacuum after the decimation of the Michel Prairie Kutenai. Schaeffer places the Shoshoni well into southern Alberta, as far as the Bow Valley. His informants reported Kutenai attacks over the mountains to raid the Snake/Shoshoni. The second smallpox epidemic of 1781-82, according to Schaeffer, devastated the Shoshoni and drove them south, leaving the Bow Valley to the encroaching Blackfoot (1982:7-8).

Schaeffer thus differs from nearly all others in arguing against any important presence of Kutenai in southern or southwestern Alberta. He does not see evidence of a true Plains Kutenai group. Further, he argues that epidemics, not the Blackfoot, drove the transient Michel Prairie band out of southwestern Alberta. In this regard only, he has the support of Turney-High. Finally, he places the Shoshoni in southern Alberta as far as the Bow Valley until the late eighteenth century, when a recorded epidemic apparently drove them south and permitted the Blackfoot to move in. Schaeffer then agrees with most other accounts which place the Blackfoot north of the southern Alberta Plains until well into the Historic Period.

Wissler cites the Henry and Thompson information on Blackfoot displacement of the Kutenai, and adds that the Peigan also have traditions of driving the Kutenai west over the mountains (1910:13). In summing up all available data, including his own fieldwork with the Peigan, Wissler states:

> The Piegan claim that before the white man dominated their country (an uncertain date probably 1750-1840) the Blackfoot, Blood and Piegan lived north of Macleod; the Kootenai in the vicinity of the present Blood Reserve; the Gros Ventre and the Assiniboine to the east of the Kootenai; the Snake on the Teton River and as far north as Two Medicine River; and the Flatheads on the Sun River. These traditions were so definite and consistent that consideration must be given to them (Wissler 1910:17).

Oscar Lewis also accepts the idea of a Plains Kutenai group, placing them in the valley of the Belly River (1942:11). To the northeast of the

Kutenai, in the Red Deer Valley, Lewis places the Shoshoni, and to their northeast, in the Eagle Hills/Vermilion River area, the Blackfoot (ibid.).

Finally, the late nineteenth century friend and student of the Blackfoot, J.W. Schultz, also supports the existence of a Plains Kutenai group: "In the old days, however, the Kootenais lived as much on this side of the mountains as they did on the other" (cited in Hale 1887:25). Hale says Schultz's statement agrees with his own information obtained from the Blackfoot, and that, "As the Blackfeet now occupy the country which the Kootenais formerly possessed, on the east side of the mountains, it is clear that the Blackfeet must have expelled the Kootenai from that country, and very probably have conquered and absorbed some portion of the tribe" (Hale 1887:25-6).

## THE GROS VENTRE

The Gros Ventre (also known as Big Bellies, Fall, Water Fall, or Rapid Indians, or, in Blackfoot, as Atsina) are an Algonkian speaking group who seem to have played a major role in central and southern Alberta during the early Historic Period. The Gros Ventre are known to be closely related to the Arapaho, and these two groups are believed by many to have been one people at some time in the recent prehistoric past (see Kroeber 1939; Flannery 1953).

The Gros Ventre share with the Blackfoot a basic Algonkian language stock which exhibits marked differences from the core of Cree and Ojibway peoples. Hale notes:

> The Atsinas, who have been variously known from the reports of Indian Traders as Fall Indians, Rapid Indians, and Gros Ventres, speak a dialect similar to that of the Arapahoes, who now reside in the "Indian Territory" of the United States. It is a particularly harsh and difficult language, and is said to be spoken only by those two tribes (Hale 1885:697).

Kroeber has indicated that Gros Ventre speech is as different from core Algonkian language as Blackfoot, but that these two divergent languages are equally different from each other (1939:81). Kroeber says that this indicates a lengthy separation of these two groups, both from the great Algonkian body and from each other. He concludes that of all Plains dwellers, these two groups are "without known indicators of entry into

the area" (ibid.). Presumably because of their linguistic divergence from core Algonkian and because of an absence of information that, like many other historic Plains groups, they are recent migrants to the Plains, Kroeber concludes:

> We may therefore regard these two groups of tribes as ancient occupants of the northern true plains, or rather of the foothills of the Rockies and the plains tributary there to... It cannot be asserted that the Blackfoot and Arapaho groups were the only ones formerly in the northern plains. They are the only ones who we can be reasonably sure were there (1939:82).

Flannery mentions a reference to the Gros Ventre by that name in 1751 by La Gardeur de Saint Pierre - the successor to La Verendrye - when he wintered on the Assiniboine River (1953:2-3). It is not clear from the passage, however, whether or not Saint Pierre actually met the Gros Ventre at this location or simply made reference to them in his journal. Subsequent contacts were possibly made by Henday, whose "Archithinues" may have been the Blackfoot, Sarsi, Gros Ventre or all of these groups. Flannery identifies the first unquestionable description of the Gros Ventre as that by Cocking in 1772 when he referred to the Archithinue and described this group as including the three Blackfoot groups, the Sarsi and the Water Fall Indians. That the Water Fall or Fall Indians are the Gros Ventre is confirmed by Umfreville who travelled through the same area (the forks of the Saskatchewan) in the years 1784-88:

> This nation is named by us and by the Nehethawa [Cree] Indians, from their inhabiting a country on the Southern branch of the river [Saskatchewan], whose rapids are frequent. As they are not very numerous, and have a harsh gutteral language peculiar to themselves, I am inclined to think they are a tribe that has detached itself from some distant nation with which we are not as yet acquainted. In this people another instance occurs of the impropriety with which the Canadian-French name the Indians. They call them Gros Ventres or big bellies; and that without any reason as they are as comely and well made as any tribe whatever; and are very far from being remarkable for their corpulency (cited in Flannery 1953:4-5).

Umfreville's placement of the Gros Ventre on the South Saskatchewan concurs with Cocking's description. Mackenzie (1903:111) placed the Gros Ventre on the same river, but nearer the forks, and located the Blackfoot, Blood and Peigan, in that order proceeding up river. Harmon (cited in Wissler 1910:8) constructed a map which placed the Gros Ventre

(Fall Indians) between the Red Deer and the "Bad" Rivers (from Fidler's journals we know this to be the Bow River). Curiously, Harmon made no mention of the Peigan; he placed the Gros Ventre between the Assiniboine on the east and the Blackfoot on the west. Henry stated that the Gros Ventre formerly lived on the land between the Red Deer and the Bow but that by the time of his visit in 1810 they had moved south (Coues 1897:530). Fidler made no mention of a group readily identified as the Gros Ventre in his 1792/93 journal; however, his Chesterfield House journal refers repeatedly to the Fall Indians.

A possible hint as to the population size of the Fall Indian group is provided in Fidler's entry for November 12, 1800 where he noted, "Several Fall Indians came in: this is the last of them, we have now seen them every one, in all 180 tents of them" (Johnson 1967:275). If we estimate an average of about six persons per tent, this would produce a population of about 1000 individuals, at least in and around the area of southeastern Alberta. Fidler also mentioned that the Fall Indians were at war with the Snake, and that there were occasionally lethal scuffles between the Blackfoot and the Fall Indians (Johnson 1967:285-6).

In his Chesterfield House journal, Fidler also mentioned a Fall (Gros Ventre) Indian - Tattoed Indian connection. Fidler's editor (Johnson 1967:294) argues that the Tattoed Indians are the Arapaho who received their name from distinctive blue marks on their breasts. The Arapaho identify is quite likely correct, since Fidler noted the similarities between the Fall and Tattoed Indians:

> Three Tattoed chiefs came with their families ... this is part of a nation that never saw Europeans before. They inhabit on the eastern banks of the mountain far to the south of this, they have been fourty-four days in coming, they speak nearly the same language as the Fall Indians, and are at peace with them ... they are a pretty numerous tribe amounting to about 90 or 100 tents. Their manners are different from the Fall Indians, but are nearly of the same size and features (Johnson 1967:298).

Though largely conjectural, there is widespread belief that the Gros Ventre/Arapaho moved towards the true Plains from a homeland in Minnesota or eastern North Dakota beginning sometime in the 1600s. Michelson (1911:103) places them downstream from the Cheyenne on the Red River, and Bushnell (1927:23) identifies their earlier home as the woods northeast

of the Minnesota River. Teit's (1930:320) Flathead informants reported that around 1800 they first began to hear of a new group moving west, the Gros Ventre. These strangers were said to be found to the northeast of the Flathead, but that they originally came from country to the east or south of the Crow (ibid.). Ewers (1958:6) mentions persistent Arapaho traditions of migrations from an eastern home, probably the Red River Valley of Minnesota, and of Gros Ventre separation from that tribe.

In summary, there is no doubt that the Gros Ventre, identified as the Fall or Water Fall Indians, resided in the Plains between the forks of the Saskatchewan Rivers in the middle of the eighteenth century, based on the personal observations noted above. How long they had been in this position is unknown. Some believe that the Gros Ventre/Arapaho moved from a Minnesota/North Dakota home between 1600-1700, which, if true, would make them newcomers to the northern Plains and of little significance to our purpose. Others, such as Kidd (1937:7), believe the Gros Ventre to be ancient inhabitants of the Saskatchewan forks region. In any case, it is certain that by 1810 the Gros Ventre roamed the country between the South Saskatchewan and the Missouri rivers (Flannery 1953:10). The southern shift to their historic position in Montana may have been caused by harrassment from Cree and Assiniboine, or it may represent voluntary withdrawal after Gros Ventre raids on trading posts.

The preceding discussion represents a traditional interpretation of Gros Ventre history in southern and central Alberta and Saskatchewan. Unfortunately, this scenario is greatly complicated by close scrutiny of a number of historical records which suggest that there has been serious confusion over the identification of the Fall/Rapid or Gros Ventre Indians. The source of the problem lies in comments by David Thompson and Alexander Henry (the Younger). It should be emphasized that, to my knowledge, these explorers were the first two to visit both the middle Missouri region in the Dakotas, and the prairies of western Canada. Given this common experience, the degree of agreement between the two accounts is compelling. In 1797 (some ten years after his first visit to the Saskatchewan country), Thompson journeyed to the Missouri River to promote fur trading with the sedentary village tribes. There Thompson encountered villages of the Mandan and those of a decidedly different group which he called the Fall Indians:

> Fall Indians who also have villages are strictly confederate with the Mandanes, they speak a distinct language; and it is thought that no other tribe of Natives speak it; very few of the Mandanes learn it; the former learn the language of the latter... The Fall Indians are now removed from their original country which was the rapids of the Saskatchewan River; northwards of the Eagle Hills; a feud arose between them, and their neighbors, the Nahatheways and the Stone Indian confederates, and [they were] too powerful for them, they then lived wholly in tents, and removed across the Plains to the Missouri; became confederates with the Mandanes, and from them learned to build houses, form villages and cultivate the land. Some of them continue to live in tents and are in friendship with the Cheyenne Indians... Another band of these people now dwell in tents near the head of this river in alliance with the Peagans and their allies (Glover 1962:177-8).

At the first reference to the Fall Indians of the Missouri, one of the editors, J.B. Tyrrell, added a footnote saying that, "he evidently confuses them with the Fall or Atsina Indians, who were in League with the Blackfoot" (Glover 1962:770).

Similarly, Henry, who had already travelled to both the Missouri and the Saskatchewans areas, commented as follows:

> The big bellies, or Rapid Indians, are now stationed south of the Slaves, between the South Branch and the Missouri. Formerly they inhabited the point of land between the North and South Branches of the Saskatchewan to the junction of those two great streams; from which circumstance it is supposed they derived the name Rapid Indians. They are of the same nation as the Big Bellies of the Missourie, whom I have already mentioned. Their dress, customs, and manners appear to me to be the same (Coues 1897:530).

and,

> The Fall Indians I have already mentioned formerly inhabited the tract of land between the North and South branches of the Saskatchewan... They are no doubt from the same stock as the Big Bellies of the Missouri and the Crows. Their dress, manners, and customs are the same throughout. In their language there is some differences; still they comprehend each other perfectly well (Coues 1897:733).

Again, the editor of Henry's journal, E. Coues, tells the reader that Henry incorrectly assumed that the Fall or Rapid Indians of the Saskatchewan Basin could be equated with the Middle Missouri people. The Fall Indians, Coues says, are the Atsina of Algonkian stock who formerly

lived on the Saskatchewan, not to be confused with the Siouan Minnetarees, or Hidatsa, who are the Gros Ventre proper (1897:733).

Thus, these early historic accounts indicate, in the most unambiguous terms, the overall similarity - in every respect - between the Fall or Rapid Indians known to have inhabited the region between the Saskatchewans, and a group which lived in villages with the Mandan in the Middle Missouri region. However, two editors feel that these explorers were mistaken, apparently suggesting that the common use of the terms Fall or Rapid Indians for these two distinct groups confused the observers.

Byrne has argued (1973:552) that these explorers were not at all mistaken. The quotes cited above present a strong case for a real similarity between the two geographically separate groups both called Fall or Rapid Indians. Instead of a southward movement to the Mandan village area by the Gros Ventre/Fall Indians known to have inhabited the Saskatchewan Forks area, Byrne has argued for a northward migration of the Siouan Hidatsa group. Byrne states:

> In truth it appears that Umfreville, Thompson, Henry and others were not mistaken in their accounts, and in fact they were documenting highly probable accounts of a seventeenth and/or eighteenth century occupation of parts of the Saskatchewan Basin by one or more splinter groups of the historic Hidatsa (1973:552-3).

Byrne's argument that these intrusive peoples are Hidatsa is based on Thompson's position near known Mandan villages along the Missouri. Also, Henday's reference to similarity between this group and the Crow is revealing in that the Crow and Hidatsa are thought to have been one tribe not too long ago (Wissler 1948:176).

Thus Byrne argues for a Hidatsa presence in southern Alberta during a portion of the Protohistoric Period. Given the clarity of the Thompson and Henry passages, it would seem impossible to argue against Byrne, and hence we have evidence suggestive of Hidatsa movements from the middle Missouri area to the Canadian Plains. Russell (1982) thinks that this movement of Missouri village people, perhaps on a seasonal basis, may have been occurring since the late seventeenth century. The broader implication of this situation pertains to the ability to distinguish between Gros Ventre/Fall/Rapid/Atsina Indians of Algonkian stock and the

Gros Ventre/Fall/Rapid/Hidatsa Indians of Siouian stock. We have numerous references in the historic and ethnological records to the Fall or Rapid Indians which, for the most part, have been assumed to be the Algonkian group. With evidence of a Siouan Fall or Rapid Indian group in the Saskatchewan Basin at about the same time, we must question which stock of people these early records refer to.

One could in fact argue that all such references are to a single group were it not for a few pieces of evidence which suggest that both language stocks were indeed present in western Canada. Proof that at least some of the references to the Fall or Rapid Indians are to the Arapaho's kindred comes from an Algonkian word list compiled by Umfreville in about 1780 which includes the words Atsina/Rapid Indians (Pentland 1976). Thompson's and Henry's accounts stand as evidence of a Siouan presence on the Canadian Plains, possibly further supported by a suggestive statement by Cocking. When Cocking was joined by the Archithinue natives, whom he identified as the Water Fall, Sarsi and Blackfoot groups, he was able to communicate with them through one of the Assiniboine guides who spoke the language of the Water Fall Indians (Burpee 1908:111). Assiniboine and Hidatsa are both Siouan, possibly indicating that this mention of the Fall Indians refers to a group from the Missouri area.

This confusing situation cannot be resolved at this time. Much more research will need to be done before the whole matter can be sorted out, if indeed it ever can. For the present, the best evidence suggests the following summary. The Gros Ventre of Algonkian stock have, like the Blackfoot, been isolated from the main body of Algonkian speakers as well as from the Blackfoot for a considerable period of time. This has led some to speculate that the Gros Ventre are long time residents of the Plains. Others see the arrival of the Gros Ventre on the Plains as relatively recent, caused by a westward shift by the Arapaho/Gros Ventre, probably from the central Minnesota area, followed by a split between them. We do know, however, that several early historic contacts with a people called the Water Fall, Fall or Rapid Indians occurred in the land between the Saskatchewan rivers. We have good reason to believe that these names were applied to two very distinct groups: the Algonkian Gros Ventre, and a Siouan speaking Missouri River people, probably the

Hidatsa. The identification of which group is referred to in specific instances in the literature promises to be very difficult, as does the formulation of a more satisfactory explanation of how these groups got the same name and of the relationship between them. Based on linguistic data and the earliest historical records, it seems that the best case for the moment is for an Algonkian Gros Ventre presence of considerable antiquity (i.e., prehistoric) in the parkland region and forest margin near the forks of the Saskatchewan Rivers. These people were eventually driven to the Plains of Montana and Wyoming by the Cree and Assiniboine. The Siouan Gros Ventre occupation of the Canadian prairies may be a more recent phenomenon, dating perhaps to the Historic Period.

## SHOSHONI/SNAKE

In the previous sections of this report we have seen repeated references to a group called the Snake Indians. In the following section we will pursue two related questions: 1) whether this group called the Snake can be shown to have inhabited the Canadian Plains near the beginning of the Historic Period; and, 2) the identity of these people. These problems are both fascinating and germaine to our topic, since it appears that strong evidence exists that the Snake Indians were the occupants of southern Alberta at the dawn of history.

The first task will be to review the data regarding the existence of the Snake in Alberta and their placement within the area. The earliest reference to the Snake Indians in the Saskatchewan Basin area comes from Cocking's journal of 1772-73. It is noteworthy that the editor of Cocking's journal, Burpee, added a footnote to the text where the term Snake first appears, informing the reader that these people could hardly be the true Snakes or Shoshoni of the Yellowstone country. He suggests that they may have been Sioux Indians (1908:103). While travelling with the Cree and Assiniboine guides and meeting Archithinue natives, Cocking remarked on the fear of Snake Indians. It is clear from Cocking's account that the equestrian natives as well as his Algonkian guides were at war with the Snake at the time of his visit (Burpee 1908). Mandelbaum (1979:9) also mentions the hostile relations between the Cree (Plains Cree) and the Snake.

The Saukamappee stories indicate that around 1730 the Snake occupied much of southern Alberta and at least parts of central Alberta as far north as the North Saskatchewan Valley. Beginning around this date, a series of battles took place which, combined with a devastating smallpox epidemic, effectively removed the Snake to a more southern position and allowed the Blackfoot to claim the Bow Valley. There is a curious discrepancy, however, between the Saukamappee stories and the often cited Thompson statement indicating that all the Plains were once in the possession of the Kutenai, with the Salish and Snake respectively farther south (Glover 1962:240). The Saukamappee stories clearly indicate that the Plains were firmly in possession of the Snake, yet Thompson ignored this when pronouncing the area to have been Kutenai country. One possible explanation for this discrepancy is that Thompson may have been referring specifically to the Plains surrounding his southwestern Alberta Peigan camp when pronouncing former Kutenai ownership, as opposed to the Plains of eastern Alberta where Saukamappee's stories took place. Lewis (1942:11) apparently accepts a Snake position based on Saukamappee's stories, for he placed the Peigan in the Eagle Hills, being hard-pressed by the Shoshoni who were to the south and west along the Red Deer.

It is evident from Fidler's accounts that the Snake were not uncommon travellers in southern Alberta; there were several encounters with them during Fidler's travels. At the time of his first visit, 1792-93, the Blackfoot had just made peace with the Snake that past summer and relations between them were still quite tense. Fidler stated that the Snake occupied a land to the south and southeast of the Peigan, at a distance of some 250-300 miles. However, the editor of Fidler's Chesterfield House journals added a critical footnote which actually pertains to Fidler's earlier Buckingham House journey. This is a statement on the former position of the Snake:

> Gens du Serpent: Shoshoni. In the entry for 30 September 1792 in his journal of a journey from York Factory to Buckingham House, Fidler included, "Formerly the Snake Indians used to inhabit about this [Eagle] Hill [SW of Battleford, Sask.] but since the Europeans have penetrated into these parts and supplied the surrounding nations with fire arms, those Indians have gradually receeded to the SW wards, and at this time there is not a tent of that nation to be found within 500 miles" (Johnson 1967:274).

This placement of the Snake (the identification of the Snake as Shoshoni is by the editor, not Fidler) along the Alberta/Saskatchewan border in the Northwestern Plains represents the northernmost penetration of this group as indicated in historical records. Unfortunately, Fidler did not specify how he came to this conclusion regarding the former positions of the Snake and the Blackfoot. Fidler's comment is strikingly similar to the account provided to Thompson by Saukamappee some years earlier. It is possible that this corroborative statement is not independent in that Fidler and Thompson may have discussed the matter. We will likely never know whether this was the case.

Although both the Buckingham House and Chesterfield House journals indicated that the Snake were then hundreds of miles distant (presumably to the south), subsequent entries in the Chesterfield journal provide evidence of a continued Snake presence in the Alberta Plains. In the entry for January 8, 1802, the same Snake Indians are located near "the Pines" which are presumed to be the Cypress Hills, and later, on January 25, ten Snake Indians were encountered by Blackfoot upriver from Chesterfield House on the edge of the Bad (Bow) River (Johnson 1967:306, 308). Numerous entries also attest to the fact that the peace Fidler reported between the Blackfoot and Snake in 1792/93 had completely disappeared.

Schaeffer (1982:7) refers to prominent Kutenai legends of pedestrian raids over the Rockies to attack the Snake Indians on the Plains around the Bow River. Recalling Schaeffer's argument, presented earlier, that an early smallpox epidemic (and not warfare) was responsible for Snake and Kutenai displacement from Blackfoot country, the obvious implication is that the Snake, not the Blackfoot, were on the Alberta Plains proper in the early 1700s. Flannery, however, appears to support the idea that the Snake were displaced by the Peigan after the epidemic of 1781. This is based on Cocking's remarks concerning the fear of the Snake Indians: "If this chronology is correct, Cocking's companions had every reason to fear the Snake and to suspect their presence, as the power of the latter would not have been broken in the northern Plains until 1780" (Flannery 1953:17). However, Henday's presence in the Red Deer Valley in 1754, and his failure to make mention of a group called the Snake, casts doubt on the timing suggested by Flannery. It is possible, of course, that Henday

did in fact encounter Snake Indians, or at least knew of them, but that any reference to them is masked by his use of the generic terms "Archithinue" and "equestrian." This seems unlikely in light of the fact that Cocking, Thompson and Fidler all used the separate term "Snake" in apparent contrast to the generic words used for the Blackfoot, Gros Ventre and Sarsi.

In the mid 1940s, Ewers interviewed an aged Blood Indian named Weasel Tail who was believed to have been born in about 1859. Weasel Tail spoke to Ewers about the "dog days" using the information supplied to him when he was younger by his own aged relatives. Ewers believes that these stories should be of particular interest to students of Saskatchewan history and prehistory since, "it is most probable that the Blackfoot tribe dwelt within the present boundaries of this province before they acquired firearms and horses and moved westward toward the Rocky Mountains and southward into present Montana" (1960:45). Weasel Tail recounted that long ago, before there were horses and guns, the Snakes and the Blackfoot were friends, but that the killing of a Blackfoot boy by a Snake man led to warfare. A confrontation occurred at the Bow River near present-day Gleichen, Alberta, and from that time on the Snakes and the Blackfoot were continuously at war (Ewers 1960:46-7). As the Blackfoot began to acquire guns, war parties were sent out against the Crow and the Snake, and when the enemy heard the sound of the guns they fled their position near present-day Calgary and fled to the south (Ewers 1960:47).

At the same time that Rev. Wilson interviewed Chief Crowfoot (1887), he also interviewed the Blackfoot Chief Big Plume. This chief told him, "A long time ago there were no horses. There were only dogs. They used stones for their arrows. They were fighting with people in the Rocky Mountains. These people were Snake Indians" (Wilson 1887:13). Finally, Dempsey (1973:19-22) also argues for both a Snake Indian presence in southern Alberta during at least part of the eighteenth century, and for this group being Shoshoni. Dempsey's evidence rests with some of the accounts already cited above, and with the form and distribution of the rock art motif known as the shield bearing warrior. This motif is found in Alberta as far north as the Drumheller area and is said to be associated with the Shoshoni (Dempsey 1973:19-20). A more detailed

version of this argument, reaching essentially the same conclusion, is provided by Keyser (1975).

We will now turn to the question of the identity of the Snake Indians. To my knowledge, there is not a single reference to the Shoshoni Indians being on the Canadian Plains in any of the early historic records. There is, however, ample reference to the group called the Snake Indians. That Snake is a synonym for Shoshoni has been implicitly accepted by many researchers, and only seriously investigated by a few. As there is a strong case for this group occupying southern Alberta at the end of the Prehistoric Period, it is critical that this problem of identification be pursued.

The Snake-Shoshoni connection has been commented on by many students of Plains anthropology (see Henshaw 1910; Wissler 1948:222). The term Snake was apparently first introduced by La Verendrye in 1742 when he heard of them at the Mandan villages on the Missouri (cited in Spencer and Jennings et al. 1965:273). The first connection between the word Snake and the Shoshoni group came from Lewis and Clark who, in 1804, produced a map which identified the people of the northern Great Basin as, "Shoshoni or Snake" (ibid.). Wissler informs us:

> The Kiowa, Comanche and some of the Snakes lived east of the Rocky Mountains out on the dry plains, like true buffalo Indians. We call them marginal tribes because their homelands were where the great desert country and the buffalo plains meet ... In early literature they were indiscriminately called Snakes, at other times Horse Indians ... How they came to be called Snakes in the first place is lost to history, but the name was in common use when Lewis and Clark explored the upper Missouri country. Later the name Snake was restricted to members of the family living along the Snake River in Idaho, and a few closely related tribes in Oregon. Shoshoni was then used to designate a tribal group in Wyoming and adjacent parts of Colorado and Idaho (1948:222).

Some writers simply substitute Shoshoni for Snake when writing about early southern Alberta history (e.g., Schaeffer 1982). Others (Forbis 1963:11) say that while the connection is probably correct, we should still be wary of problems such as the use of the term Snake in a generic fashion, applying to more than one group. Still others (Byrne 1973:553) argue against the Snake-Shoshoni correlation. We will review the

historical documentation for the comings and goings of Snake Indians to see if this sheds any light on the issue.

My research suggests that the term Snake, as found in numerous historic accounts from western North America, does in fact apply to a group of the Shoshoni Indians. The monograph on the Shoshoni-Bannock by R.F. and Y. Murphy contains numerous references to a Snake-Shoshoni connection. I will cite a few passages. Alexander Ross observed, "The great Snake nation may be divided into three divisions ... but as a nation they all go by the general appellation of Sho-sho-nes, or Snakes"; from Zenas Leonard's journal, "The Snake Indians, or as some call them, the Shoshonie, were once a powerful nation, possessing a glorious hunting ground on the east side of the [Rocky] mountains; but they ... have been almost annihilated by the revengeful Blackfeet"; Father De Smet reported, "the Shoshonees or Root-diggers had a population of 10,000 ... the missionary claimed they were called Snakes because they burrowed into the earth and lived on roots"; Albert Gallatin referred to the "Shoshoneer or Snake Indians ... the eastern Shoshonees are at war with the Blackfeet" (all cited in Murphy and Murphy 1960:296-7).

Finally, the Murphys comment extensively on the Snake/Shoshoni:

> Most early writers designated the Shoshonean-speaking population as "Shoshonees" or "Snake Indians." The term "Snake" was generally applied indiscriminately to the northern Paiute of Oregon and to Bannock and Shoshone groups in southern Idaho. Frequently only the mounted people are considered true "Snakes" ... Although de la Verendrye's "Gens du Serpent" can only be presumed to be Shoshone, there is little doubt that the "Snake" of whom Thompson's Blackfoot informants spoke were Shoshone (Murphy and Murphy 1960:298).

They conclude, "It is possible to document almost endlessly the ways in which the labels 'Shoshone,' 'Digger,' and 'Snake' were applied in turn at the same time to Shoshone - Commanche and Mono-Bannock speakers alike" (Murphy and Murphy 1960:299). Furthermore, Hugh Dempsey (personal communication 1985) has stated that the Blackfoot word for Shoshoni, and no other group, is Snake. Hale states emphatically, "The Snakes are the Shoshonees. This widespread people ... were in former days among the most inveterate enemies of the Blackfeet"(1887:26). Reviewing the history of Blackfoot/Snake conflict in the Northwestern Plains, Ewers (1960:46) identifies the Snake as the Shoshoni. Of course, the

documentation of a connection between the terms Snake and Shoshoni does not rule out the possibility of other groups also being called Snake, nor does it demonstrate that the Shoshoni-Snake ever penetrated southern Alberta. Evidence to be presented below, however, argues strongly that the latter point at least is correct.

We may attempt to resolve the issue of an identity for the Snake by process of elimination. For this purpose, Fidler's 1792/93 journal is most useful since at one time or another he mentions the greatest number of different groups, including the Snake. Using this account, we may be reasonably sure that the Snake are not the Blackfoot, the Sarsi, the Kutenai, the Flathead, the Cree, the Assiniboine, the Crow Mountain and the Southern Indians (Cree). Groups not mentioned by Fidler which could conceivably be the Snake include the Shoshoni, Arapaho, Hidatsa or Mandan, an Interior Salish group other than the Flathead, and some of the Dakota Sioux. Likewise, the Fall (Gros Ventre, Atsina) can be ruled out because Cocking mentioned them and the Snake in a context which clearly indicates that they are not the same.

Byrne (1973:553-4) has suggested that the Snake may be the Hidatsa. His argument rests largely on the Thompson and Henday accounts of two groups of Fall or Rapid Indians, one in the Saskatchewan area and one in the Missouri River basin, who are clearly of the same culture. Byrne suggests that the term Snake may have been applied by the Blackfoot to the middle Missouri intruders (Hidatsa), thus accounting for the numerous records about the Blackfoot driving the Snake from the Saskatchewan basin. However, several portions of Cocking's journal would appear not to support Byrne's argument. Cocking was travelling with Cree and Assiniboine when he encountered the Archithinue who, we learned, are the Water Fall or Rapid Indians. Subsequently, Cocking's repeated references to the enemies, the Snake, indicate that the Snake and the Water Fall or Fall are clearly not the same group. However, the confusion over the possibility of two sets of Fall Indians - Algonkian and Siouan - in the Saskatchewan basin at roughly the same time, means that Byrne's suggestion cannot be dismissed. Also relevant to this argument is the fact that Thompson (Glover 1962:247) states that the allies of the Snake were the Kutenai and Salish, two tribes associated with the mountains and plateau region. Having these groups as allies tends to argue for a

western, not eastern, orientation for the Snake. Also the fact that the defeated Snake are said to have retreated to the upper Missouri area (Morton 1939:19) or further across the Rockies (Lewis 1942:13) is suggestive of prior connections with this region rather than the middle Missouri. These pieces of information are more supportive of a Shoshonean affiliation for the Snake.

Thus, although a strong case can be made for a formidable Snake Indian presence in southern Alberta from the early to late eighteenth century, we are not, unfortunately, much closer to knowing who these people are and, especially, whether or not they are Shoshoni. The Shoshoni are speakers of what is called Shoshonean or Uto-Aztecan. This language family is generally considered to centre in the plateau area west of the Rockies (Wissler 1908:199), supported by linguistic studies by Kroeber (cited in Wissler 1908). The critical question then seems to be whether or not some Shoshoni moved out of this plateau homeland, and eventually ranged into the Canadian Plains. Lowie (1909) sees no Plains-related traits in Shoshonean culture and hence rejects the idea of a Plains affiliation (cited in Byrne 1973:520). Shinkin, on the other hand, proposes that the proto-Shoshoni-Commanche began a movement out of the plateau by the year 1500, and that by 1690-1700, they had acquired horses and were ranging far into the northern Plains, encountering the Blackfoot (cited in Hewes 1948). Teit argues for the existence of several Shoshoni groups. Based apparently on native traditions, Teit (1930:304) describes two Shoshoni groups, a mountain group and a Plains group. The Plains group occupied the country from the Yellowstone River east to the Big Horn Mountains, west to the Rockies, and north to the Sweet Grass Hills on the Montana-Alberta border (Teit 1930:304-5). The existence of such a group would concur with Fidler's description of Snake Indians living several hundred miles south of the Bow Valley, but it would not satisfy the numerous references which place the Snake around the Bow, the Red Deer, and the Eagle Hills/North Saskatchewan region. It is possible, of course, that Teit's account of a largely Montana-based Shoshoni Plains group reflects the position of these people after a southern displacement - due to either warfare, disease, or both.

In sum, there is convincing evidence of a group called the Snake Indians in southern and east-central Alberta during the late eighteenth

century. Several early explorers mentioned the immediate presence of these people, and Fidler encountered them in both southeastern and southwestern Alberta. Fidler mentions the Eagle Hills of west-central Saskatchewan as an area formerly occupied by the Snake. Cocking's note locating the Snake near the South Saskatchewan River in 1772, together with Fidler's 1792 account of a Snake homeland several hundred miles south of the Bow, seem to indicate a rapid southward movement of these people. The stories of Saukamappee, however, argue for an earlier southern displacement of the Snake. The length of their occupation of the southern part of the province is unknown, but according to Saukamappee, they were there sometime before 1730. Shoshoni remains the most likely identity of the Snake Indians, but some other groups cannot be ruled out. A firm identity for the Snake Indians remains one of the great unsolved puzzles of western Canadian history and prehistory. Its resolution is most important for our purposes since it would appear entirely reasonable that, near the time of first European influence and contact, the landscape of southern Alberta was under the control of this enigmatic group. How long this situation had been in existence is unknown, and is beyond the scope of this paper. Resolution of the period of tenure of the Snake Indians in southern Alberta falls to the discipline of archaeology.

## THE ARCHAEOLOGICAL PERSPECTIVE

The scope of this paper does not permit a full review of the many archaeological studies which can be brought to bear on this issue of tribal placements in southern Alberta and adjacent areas. This is not to downgrade the potential utility or quality of this information, but simply an admission of limitations of the writer and, quite likely, the weariness of the reader. Admittedly, I, and likely many of my colleagues, have long been of the opinion that the primary data source for the pursuit of Late Prehistoric and Protohistoric tribal locations would be historic and ethnographic records. While not yet ready to denounce this position, an example of ethnohistoric limitations and archaeological potential drawn from our Saskatchewan neighbours is appropriate at this point.

The historical records concerning Cree tribal positions have the benefit of resulting from considerably earlier European contact than was the case in the Canadian Plains. These records have been interpreted as indicating a territorial position for the Cree in the vicinity of James Bay and Lake Nipegon in Central Canada at the time of first historic contact (Jenness 1963; Ray 1974; Mandelbaum 1979). We also know that when the area of central Saskatchewan was first penetrated by European fur traders, it was in possession of the Cree and Assiniboine (Russell 1982:151). This Cree-Assiniboine presence near the forks of the Saskatchewan has been regarded as a Historic Period movement of these peoples out of central Canada as a result of the activities of the fur trade. Mandelbaum reports:

> They have occupied the territory (forest-plains transition zone) only since the beginnning of the nineteenth century, for it was formerly inhabited by the Assiniboine and Gros Ventre in the eastern part and by the Blackfoot in the western section. That the Plains Cree came from the east is amply verified both by documentary evidence and by the testimony of living informants who assert that their parents or grandparents once lived further to the east (1979:7).

and,

> Although their culture in the latter part of the nineteenth century was overwhelmingly that of the Plains area, the historic evidence indicates that the forebearers of the Plains Cree, at a not too remote date, lived in the Eastern Woodlands and shared the characteristic traits of that region (1979:15).

This view of a relatively recent (i.e., historic) westward expansion of the Cree people, acting as middlemen in the fur trade, is commonly accepted (Ray 1974; Morton 1939). Recent archaeological research in central Saskatchewan, however, is suggesting a contrary argument. The research concerns a series of late prehistoric sites in central Saskatchewan near the town of Nipawin, downriver from the forks of the Saskatchewan. These sites have been excavated as part of the Nipawin Reservoir Heritage Study (Meyer 1977; Burley 1982; Burley et al. 1982) and have been reported on in some detail by Meyer (1977, 1981) and Gibson (1984). The key issue relevant to our considerations arising from this research is the affiliation of a particular pottery style with the Cree peoples. The pottery tradition is referred to as Clearwater Lake complex

(Hlady 1971), and is also considered part of the Selkirk ware complex or composite (Syms 1977).

It has generally been accepted that Clearwater Lake pottery was produced by late prehistoric and early historic Cree people (Syms 1977:108; Meyer 1981:27). Excavations along the Saskatchewan River have resulted in the identification of a series of sites containing this pottery type and which have now been well dated to the mid and late sixteenth century (Meyer 1981; Gibson personal communication 1985). If it is accepted that the Clearwater Lake pottery style is evidence of Cree people, the Nipawin data present a strong case for a Cree presence in central Saskatchewan well over a century before the historical and ethnographic records suggest. Furthermore, the theorized stimulus for the Cree expansion, i.e., the direct result of interaction with the fur trade, is also incorrect. In explaining this apparent error in historical interpretation, Russell (1982) has pointed out that our image of tribal territories has largely been based on the first sighting of a people, and that this may well have created the appearance of a core or home territory, "that is, in no single case do the early documents specifically argue for a recent expansion by the Cree or Assiniboine, but, instead, simply expand upon the limits of their known territories" (1982:155). Thus, Europeans are the people expanding. This is not to deny the ultimate origin of Cree people in central Canada; it is the timing and motivation of this westward movement that is being questioned. Archaeological evidence is indicating that a considerable body of historical data, and the subsequent interpretations of these data, may well be incorrect.

The Saskatchewan example illustrates the exciting potential contribution of archaeological studies to the study of the origins, movements and activities of various tribal or ethnic groups. At the same time, it raises the single most critical point of such attempts: whether material culture items can be diagnostic of a specific ethnic or tribal group. This, of course, constitutes a question of enormous complexity which is by no means resolved by contemporary archaeological thought (see Weissner 1983, 1985; Sackett 1985). A detailed review of this issue is not possible here, but we can at least mention a few of the regionally

relevant attempts at ethnic identification and, more importantly, discuss some of the attendant principles and assumptions.

Some of the attempts to link archaeological assemblages with historically named peoples include Byrne's (1973) use of pottery and ethnographic records to suggest the remains of Blackfoot and possibly Kutenai prehistoric groups. Forbis (1960) used material culture and known historic tribal distributions to suggest a Blackfoot utilization of the Ross site in southern Alberta (but see Forbis 1970:20 for a reconsideration). Reeves (1983) has generally avoided linking archaeological materials with named tribes but, as Byrne (1973:521) points out, he has employed terminology suggestive of proto-Kutenai and Blackfoot peoples. McCullough (1982) utilized mostly historical records but included some archaeological data to argue for the presence of Blackfoot peoples in central and northern Alberta. As discussed above, Keyser (1975) and Dempsey (1973) have used petroglyph styles to argue for Shoshoni people in Montana and southern Alberta. Frison (1967; Frison et al. 1978) has used artifact assemblages and historic tribal distributions to argue for the presence of Crow Indians at two bison kill sites in Wyoming. L. Brumley (1971), on similar grounds, has proposed that the Narrows site in Waterton is of Kutenai origin. Greaves (1982) has utilized statistical analyses of projectile points to argue that ethnicity of four Northwestern Plains groups can be identified by point measurement.

Yet all of these studies, and many others, have avoided the central issue which was stated by Forbis over 15 years ago, "not a single site or scrap of prehistoric material culture can be positively ascribed to any historic tribal group" (1970:45). With the exception of Greaves, the above studies have simply utilized the available data to arrive at the most likely scenario of prehistoric tribal identities. Such attempts are useful and certainly worthwhile, but should not be interpreted as proof of tribal affiliation with any particular artifact or assemblage. Greaves' work differs in that, rather than ascribing tribal identity to a particular site or sites, she accepted the identifications supplied by other researchers and attempted to demonstrate that material items, specifically points, would be different and hence diagnostic of each tribal group. This work suffers from the fact that most sites selected

by Greaves are positioned precisely in those areas where the argument for prehistoric inhabitants is highly contentious (i.e., southwestern Alberta). Although she seems to assume that the historic and protohistoric boundaries of the relevant groups are all well documented (1982:24), Greaves is accepting tribal identifications which are largely unfounded. Virtually none of the primary literature on tribal boundaries is referenced, and some literature cited (e.g., Teit 1930) does not support the stated tribal boundaries. I do not mean to single out Greaves' work for criticism, for more studies in this vein are urgently required. But in order to be convincing, we must be assured that the methodological rigour displayed in obtaining results is matched when selecting the data.

Northern Plains archaeologists have thus far been stymied and frustrated by the inability to positively identify "type" sites which can be confidently attributed to the actions of a known native group. This failure of the direct historical approach in the Canadian Plains has been cogently argued by Forbis (1963) and need not be repeated here. The fundamental problem lies in the fact that we will not likely find "the smoking gun" at sites in the Alberta prairies. That is, with actual historic contact occurring many generations after Alberta groups had already been profoundly affected by European culture, the first observers did not have the opportunity to record the composition and exact placement of a number of non-perishable items of material culture which, upon recovery by the archaeologist, could be used to establish baseline material culture sets for specific groups.

Recognizing this rather hopeless situation, Forbis (1963) suggests that the direct historical approach must be replaced by the inferential historical approach which, by definition, is not likely to result in solid proof of tribal affiliation. Instead, this methodology combines a number of lines of evidence, including historical records, coincident distribution of artifacts and historically recorded tribal locations. It is the convergence then of several lines of evidence toward a single conclusion which is likely to produce useful results (Forbis 1963:15).

Before leaving this topic, it should be noted that while Forbis' summary of the problems of the direct historical approach in the Canadian prairies is indisputable, it is nonetheless formulated on an assumption

which may be somewhat restrictive. This is the implication, in his writing and by others who have pursued the topic (e.g., Byrne 1973), that typical archaeological artifacts - scrapers, points, flakes, potsherds, etc. - are the sole materials to be employed in linking named tribes with archaeological sites. Before all hope is abandoned for the generation of firm and direct links, I believe that a broader spectrum of prehistoric and historic native life could be examined. For example, I am encouraged by the attempts of Keyser (1975, 1978) to link rock art styles from Alberta sites with peoples from the Great Basin and the B.C. Plateau. One might well expect that designs and motifs may be peculiar to separate cultures, and additional research might establish this. Similarly, stone features such as tipi rings and medicine wheels could be shown to be sensitive to tribal identity. Peter Fidler mentioned differences in tipi size and structure between the Blackfoot (Peigan) and the Southern (Cree) Indians (entry for Nov. 16, 1792). Henday described a camp of the Archithinue natives which had two separate lines of tipis set up so as to form an avenue or street (Burpee 1907:338). In contrast, Kroeber (1902:8) described an Arapaho camp as being a large circle of tents with an opening to the east. John Brumley (1985) has advanced the hypothesis that certain kinds of medicine wheels may be Blackfoot death lodges. Dedicated research on matters such as vision quest sites, stone effigies, and even cairns and drive lanes may prove equally encouraging. Likewise, burials, were they not so painfully rare, could well prove to be useful indicators of tribal identities. Walker (1984) has indicated some potential patterning of burial practices during McKean and Oxbow times, while Brink and Baldwin (1985) have suggested burial patterns associated with Pelican Lake material culture. These, of course, are much too ancient to be of use for tribal identifications; however, they illustrate the principle that burial practices may well be temporally and culturally sensitive.

Finally, faunal material should not be ignored. It is quite conceivable that the representation (and/or abundance) of various faunal species at a site could be a clue to its inhabitants, or that methods of butchering and processing are equally sensitive. Turney-High (1941:37) recorded that the Kutenai method for butchering bison was indistinguishable from that of the Blackfoot. While this statement is

initially discouraging to our tasks, it is at least a positive sign that ethnographic comments on such matters are available.

The point emphasized here is simply that successful application of the direct historical approach, or variations of it, need not rely solely on traditional site data. Research may yet show that aspects of prehistoric Plains culture with preservable material correlates can be confidently linked with specific tribal groups. Furthermore, while it is probably safe to assume that no important historical documents on western Canada remain to be discovered, the research potential of the existing records has not been expended. I am convinced that the historical records of Plains peoples remain the very best source of information on tribal identities and territories. Problem oriented consultation of these records will likely provide fruitful results. In other words, although the data base is essentially a static one in that we can be reasonably sure that no major historical records have gone undiscovered, the problem solving potential of extant records has, by no means, been exhausted. This is especially true in comparisons between these records and the archaeological record.

## CONCLUSIONS

Ideally, a concluding section to this essay would draw together the relevant facts and venture a pronouncement as to which ethnic or tribal groups occupied what territory in and around southern Alberta at the end of the Prehistoric Period. Unfortunately, as the reader has no doubt detected, facts are at a premium in the subject at hand. We are left mainly with impressions, possibilities and speculations. Those hoping for definitive statements on precise locations of specific tribes, their tenure in these locations, and their previous territories, will be disappointed. This concluding section will briefly summarize the major arguments regarding the Late Prehistoric-Historic Period locations of those groups which most likely resided in the Alberta prairies. Following that, a few final comments will be made regarding the endeavour of tribal boundary identification.

We know that when the earliest Europeans ventured towards the Saskatchewan Plains, a wide range of native groups were present and

apparently involved in a full time pursuit of their livelihoods. These included the Blackfoot, Blood, Peigan, Sarsi, portions of the Assiniboine, the Snake and the Fall or Rapid Indians (the Gros Ventre of Algonkian and/or Siouan stock). The Kutenai, by virtue of their position in southwestern Alberta (1792-93), were apparently residents of the mountains and foothills, not the Plains. Because the early explorers travelled almost exclusively along the two Saskatchewan rivers or their tributaries, we have virtually no early information for the residents of southeastern and south-central Alberta. This is truly unfortunate, for some additional information about these crucial areas could greatly assist in resolving some of the problems associated with the territorial boundaries of the various groups under discussion.

The following scenario reflects what I consider to be the best fit between the historical, linguistic, and ethnographic lines of evidence (Figure 2). In the first quarter of the eighteenth century, the Plains and foothills of Alberta were occupied and controlled by two groups, the Snake and Kutenai Indians. The Snake occupied all of south central and southeastern Alberta, extending into Saskatchewan. The northern limit of their territory was the Bow or South Saskatchewan although, like any group of hunter/gatherers, this was highly flexible. Their western limit extended near, but not into, the foothills country of the Rockies. Their eastern limit is more vague, but probably did not extend far into southern Saskatchewan. Their southern limit is unknown. The mountains, valleys, foothills and the adjacent plains just east of the mountains, perhaps as far as Pincher Creek or Fort Macleod, was Kutenai country. Kutenai ranged considerable distances to the north and south within and just east of the mountain chain; their northern limit at one time was to the headwaters of the North Saskatchewan. Their southern and western limits are unknown, although there is little reason to believe that they were vastly different from historically recorded positions. The southern edge of the boreal forest, the Alberta parkland and the parkland/prairie transition zone was occupied by the Blackfoot, Blood, Peigan, and, possibly at this time, the Sarsi. This latter group is demonstrably a late comer to the parkland and may have just arrived by the early eighteenth century. The Blackfoot nation claimed the valleys of the North Saskatchewan, Vermilion, Battle Rivers, and fronted the Snake to

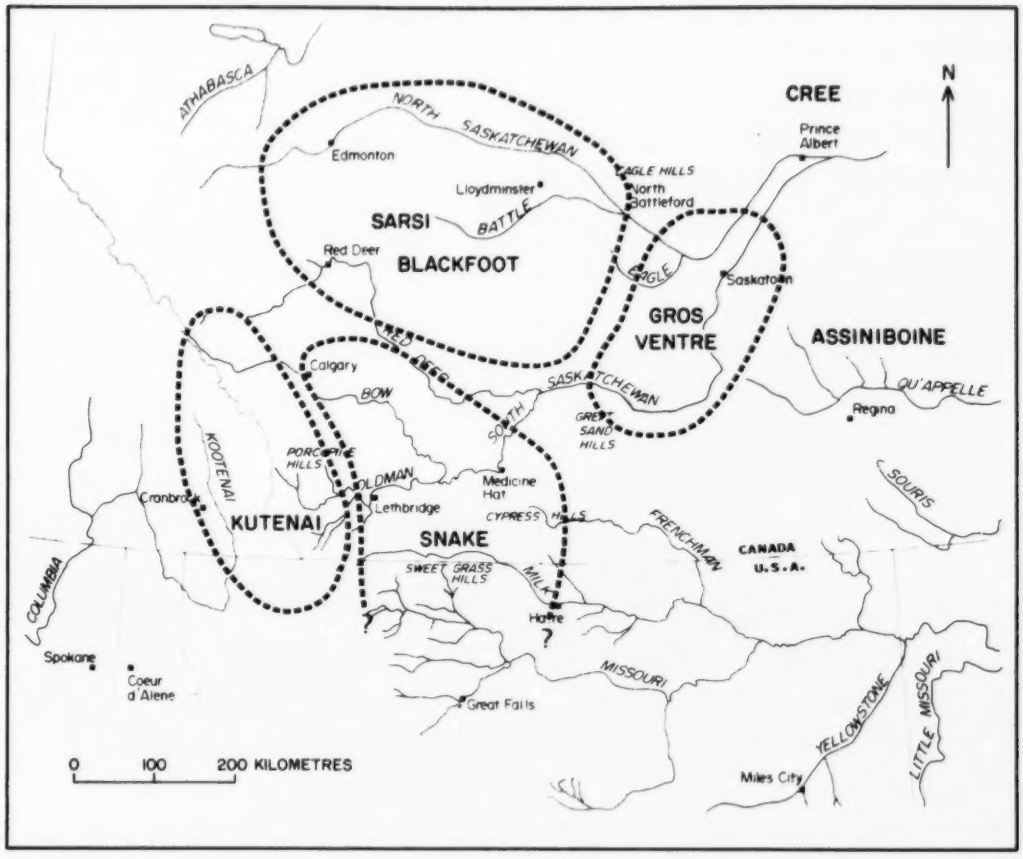


Figure 2. Postulated positions of selected Plains groups circa A.D. 1700.

the south of these drainages. Eastward their range extended no further than the Eagle Hills in west central Saskatchewan. Their northern boundary presumably was the southern edge of the boreal forest, where they may have originally contacted the southern group of Beaver Indians, the Sarsi. To the west, their territory probably dipped south following the parkland/prairie interface to the foothills in the vicinity of present-day Rocky Mountain House. Finally, the Gros Ventre/Atsina group of Algonkian stock occupied some of the middle ground between the forks of the Saskatchewan rivers, separating the Snake and the Blackfoot at least on the eastern boundary. The Gros Ventre may have extended to the southeast some distance beyond the forks, again following the parkland belt. They likely did not extend into the boreal forest to the north and east. To the south and west, they utilized the territory between the

Saskatchewans about as far as the Alberta-Saskatchewan border, extending beyond this line somewhat, along the South Saskatchewan.

The preceding outline is strictly conjectural, and numerous pieces of conflicting evidence can be cited. However, it appears that the greatest number of accounts, as well as the earliest and seemingly most reliable records, support the above described early tribal positions. Given the contradictory nature of both tribal traditions and historical accounts, full agreement on the matter of tribal locations will never be achieved. A "best fit" scenario is indeed the only method of approaching the issue.

The tribal positions described above are only relevant for the period just before European contact, not necessarily before European influence. Just after first contact, it would appear that the preceding scenario changed rapidly. The majority opinion from diverse sources suggests a southern or southwestern shift of all relevant parties. Several accounts indicate that the Snake, feuding with the Blackfoot and stricken by disease, were moving south into Montana. Plains Kutenai largely lost their small hold on the Plains in southwestern Alberta and were confined almost entirely to the foothills and mountains. Within the mountains, their northern range was considerably reduced due to encroachment of Peigan and Sarsi, and they seldom ventured north of the Highwood River. Sarsi were firmly fixed on the Plains, concentrated in the Bow Valley but moving with the various Blackfoot groups. The Blackfoot moved south to fill much of the Plains proper formerly occupied by the Snake and Kutenai. Blackfoot were firmly in control of the Saskatchewan Basin, probably as far south as the Sweet Grass Hills, although the area south of the Bow could well be contested. The Gros Ventre were likewise moving to south of their former position, still occupying some of the area near the Saskatchewan forks but primarily situated on and below the South Saskatchewan.

Once again, this scenario can be attacked from numerous positions but is argued to be compatible with most of the available data. At this point, however, it is necessary to elaborate on a point which was briefly mentioned above. In our reconstruction of Plains tribal positions, we relied heavily on the accounts of the first explorers who, in all cases, originated from an eastern point, journeyed west, and then returned. Their exposure to the groups under discussion here was thus east to west

and, in the exploration of the South Saskatchewan, to the southwest. This direction of exploration largely parallels the direction of postulated tribal movement; this may indicate the operation of some sort of "discovery principle," not unlike the concept of a type site or a diagnostic artifact, where an impression is formed of a people's territory based on the first encounter. Blackfoot were encountered near the Eagle Hills in the parkland region, and this was pronounced their home. As subsequent travel penetrated deeper into previously unexplored regions and Blackfoot were again encountered, it seemed to indicate a migration from their known homeland. As Russell (1982) noted regarding the proposed Cree expansion, it is the Europeans who were expanding and thus creating the appearance of an expanding or migrating native population. Syms also (1982:3-4) has suggested that this process may have been operant with regard to western Algonkians. This is not to say, of course, that south and westward movements of groups on or near the Plains at the start of the Historic Period did not in fact occur. Certainly, the revolutionary conditions of foreign contact and trade introduction provided ample stimulus for territorial shifts. We must simply accept the fact that the narrow view of a few explorers on a few rivers for a few months cannot provide us with a holistic picture of tribal boundaries and ranges.

Tribal movements and territories after the eighteenth century do not concern us here. In concluding this work, I would like to raise a few final points concerning the ideas behind a search for a people's homeland.

## Territory and Ethnicity

Among the many things Europeans brought with them to this country was an infatuation with the concept of territory. The cultural background of the colonizers was such that from the earliest days, the natives were identified with particular territories. Mackenzie goes to considerable lengths to "place" the Plains and adjacent tribes in their proper positions. Virtually all of the primary historical material relating to Plains peoples makes some reference to the area or region to which particular groups belong, but there are few, if any, references to their habits of movement. Like Europeans themselves, the natives were probably viewed as having a defined territory of known geographical limits in

which they habitually resided and which they dogmatically defended. Such a model may have been quite inappropriate, at least for the Plains peoples. The area of the northern Plains is vast, encompassing about 750,000 square kilometres. The potential for human movement within this region, while still maintaining an essentially Plains way of life based on similar methods of exploiting similar resources, is equally vast. It is very possible that a concept of territory, as we think of it, was lacking among prehistoric Plains Indians and only exists in the records as a European imposition. Territory or homeland may well have been the precise area of land which a group of people occupied and could, if necessary, be defended. The traditional circles drawn on maps representing tribal boundaries may be fine for a single point in time, but totally inappropriate for viewing life on the northern Plains. Such a life may well have been a fluid, dynamic process of continuous movement, and not necessarily in an ordered, patterned fashion. Any appearance of intentional patterning may have been the coincidental result of numerous stimuli which no doubt affected peoples' decisions as to when and where to move; such stimuli may include perceived availability of food sources, the status of relations with neighbours, ecological conditions of various areas, intra-group social relations and conditions, and an endless spectrum of other factors. Our desire to confidently assign a region or sustained habitat or territory to these people may ignore their own cultural values and habits which may in fact demonstrate that territory had little or no meaning.

I am impressed, for example, by Flannery's (1953:12-14) account of Gros Ventre movement out of the northern Plains to join their kin, the Arapaho, and to travel to southern Colorado/northern Texas. There they traded with Mexicans, then made their way back north to central Montana, all in the space of a few years. Obviously, only the horse permitted such extensive mobility, yet the underlying principles and processes of a people's culture which enable such events to occur may well have a long history. It may be very erroneous to see this ebb and flow of native culture within one massive environmental area as aberrant, produced by the revolutionary changes of European contact. I am also impressed by the apparent wisdom of Denig who spent decades living and working among the Assiniboine:

> They do not think the Great Spirit created them on or for a particular position of country, but that he made the whole prairie for the sole use of the Indian ... The Indian, therefore, occupies any section of prairie where game is plentiful and he can protect himself from enemies. With regard to any other kind of right than that of possession and ability to defend, beside the general right granted by the Great Spirit, they have not the most distant idea. The Assiniboine conquered nothing to come into possession of their habitat, they had their difficulties with surrounding tribes and still have, as others have, and continue as they commenced, fighting and hunting alternately (Denig 1930:397).

A dynamic and fluid view of prehistoric Plains societies has direct implications for the residual archaeological record. At any particular point of time in prehistory, we tend to find that certain artifact types or assemblages will dominate in an area; examples are Pelican Lake, Besant, and Avonlea points and associated materials. The general similarity of certain artifacts, especially points, has caused these materials to be classed as representing a cultural group, eventually leading to the anthropomorphic designations of Besant peoples, Avonlea peoples, and so on (e.g., Reeves 1983; Vickers 1986). One danger in this practice is that variability can be masked. Surely no site or assemblage, even those of apparent short temporal span which were rapidly buried, lacks some internal variability. Points of a named type dominate the assembly and unrecognized variants tend to be dismissed as aberrations. If Plains populations were fluid and extensively migratory, perhaps some of the variability inherent in any assemblage is in fact an indication of the constant ebb and flow of peoples of various tribal identities who share a very similar, though not identical material culture. Witness the great range of points called McKean or the McKean complex, and yet they are associated with the "McKean people." Perhaps such variability represents the shifting movements of several groups of people, who periodically warred with each other, who joined to fight common enemies, who experienced periods of prolonged contact followed by extended periods of separation, who generally lived a very similar way of life with similar material culture, but who regarded themselves as different groups of people with different names. This scenario has no more empirical substance to it than any other, yet it perhaps offers an avenue of investigation which contrasts somewhat with the current

emphasis on artifact styles as representative of homogeneous blocks of people. As Hodder has noted:

> As a result of long term historical processes different ethnic groups may have very similar material culture, while the same ethnic group may have a varied material culture in an ecologically varied area. It is therefore invalid to tot up the number of cultural similarities and differences between archaeological assemblages, erect "cultures," and assume that they have some ethnic, linguistic, or other significance (Hodder 1979:452).

What is clear from this investigation is that we really have very little idea about the relationships between material culture (and a small non-perishable portion of it, at that) and ethnic identity or affiliation. And we probably have even less understanding of how such relationships, if any exist, might be manifested in a few types of flaked stone tools. I would seriously question whether the lithic medium, and the tools and properties which accompany it, has the propensity to be a sensitive indicator of ethnic affiliation (see Sackett 1982). The old Hollywood stereotype of the cowboy pulling the arrow from the side of the covered wagon and coolly announcing "Comanche" is only wishful thinking. Over very large areas and crosscutting major environmental zones we might expect that lithic artifacts will differ in demonstrable ways and can be confidently linked with major groups, such as linguistic families. However, when considering contiguous ethnic groups exploiting the same resources in the same environment with the same techniques, with access to similar materials and with very similar non-material aspects of culture, wringing ethnic information out of lithic artifacts promises to be exceedingly difficult. I question whether the degree of variability in the medium exists, once basic functional requirements are met, to permit this range of expression.

Ceramics seem to offer greater promise in this regard. The medium of ceramics offers a much greater opportunity for cultural expression above and beyond the fulfillment of artifact function. However, it still remains to be demonstrated that this fluid medium will in fact be manipulated differently by groups in fairly close proximity and sharing basically similar cultures. The apparent association of Clearwater Lake pottery with Cree peoples, discussed above, is encouraging. Yet,

assuming that women were the potters, various complications arising from inter-tribal marriage and wife stealing can potentially confuse such associations (see Byrne 1973; Deetz 1965). Even without these complications, we are still left with the question of the capacity of any material culture to carry or transmit tribal identity. As Binford and Sabloff have argued:

> It is not uncommon to hear archaeologists from some area of North America talking about archaeological materials, described by largely Kriegerian methods, in terms of ethnic or social dynamics. We can only assume that these archaeologists are ignorant of the many empirical studies which repeatedly illustrate the point that there is not equivalence between culture, conceived in terms of cohesion among traits, and specific ethnically or politically defined units. Perhaps the ease with which the "ethnic identity" view is adopted by many archaeologists simply reflects the fact that most archaeologists are products of complex systems. Few have had much direct experience with small-scale systems, and as a growing number of scholars' knowledge of general anthropology becomes smaller, they probably do not know that among small-scale societies, at least, culture as an expression of "one's identity" is a viewpoint which is very hard to defend (Binford and Sabloff 1982:144).

Finally, there can be no denying the importance of our search for the identities of prehistoric peoples. As Forbis has said:

> Tracing the prehistory of peoples through time has always been one of the prime objectives in archaeology ... Links between the historic and prehistoric add flesh, colour and definition to the dead stones and bones that constitute cultural assemblages. They make it possible to follow the migrations, to chart the vicissitudes, and to trace the culture history of a tribe (1970:46).

Yet, at the same time, we should not allow this search to dominate and obscure our efforts. In some areas of the world, we may never successfully link the prehistoric record with historic peoples, and the Canadian Plains may well be one such place. We should not lose sight of the broader goals and purpose of archaeology: to chronicle and explain the events - both mundane and profound - and behaviours of prehistoric peoples regardless of the name by which they called themselves, or the name by which we call them today.

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